

# Ancient Commentators on Aristotle

GENERAL EDITOR: RICHARD SORABJI

## ALEXANDER OF APHRODISIAS: On Aristotle Topics 1

Translated by  
Johannes M. Van Ophuijsen

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*On Aristotle Topics 1*

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To Nelly A.W. van Ophuijsen-Bruck

for the love of useless learning  
(*akhrêsta mathêmata* Plato *Resp.* 527 D 6)

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Johannes M. Van Ophuijsen

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# Preface

*Richard Sorabji*

Aristotle's *Topics* is about dialectic, which can be understood as a debate between two people or the inner debate of one thinker with himself. Its purposes range from philosophical training to discovering the first principles of thought. Aristotle offers rules for debating, and the debates turn on the four predicables: definition, property, genus and accident. Aristotle explains these predicables, says something about how they fit into his scheme of up to ten categories, and begins in Book 1 to outline strategies for debate, such as the identification of ambiguity.

Alexander of Aphrodisias was the leading ancient commentator on Aristotle in the Aristotelian school. He wrote around AD 200, more than five hundred years after Aristotle's death. His commentaries had an immense influence first on the Neoplatonist school and then on Medieval Philosophy in Islam and eventually in the Latin West.

His commentary on *Topics* Book 1 opens the door on a major argument between the Stoics and Aristotelians on how to think of syllogistic. He discusses how to define Aristotelian syllogistic and why it stands up against the rival Stoic theory of inference. This is also treated in his commentary on *Prior Analytics* 1.1-7, already translated in the present series, and it will be useful to consult the comments of the translators, Barnes, Bobzien, Flannery and Ierodiakonou.<sup>1</sup> Alexander further considers what is the character of inductive inference and of rhetorical argument.

At least three further subjects in his commentary are of special interest. He distinguishes inseparable accidents like the whiteness of snow from defining differentiae like its being frozen and considers how these fit into his scheme of categories. He investigates the subject of ambiguity which had been richly developed since Aristotle by the rival Stoic school.<sup>2</sup> And he speaks of dialectic as a stochastic discipline, that is as one whose success is to be judged not by victory but by skill in argument. A parallel view was sometimes taken in antiquity of medical practice, as a discipline to be judged not by its success in curing patients, but by its method and skill. And the Stoics took such a view of life, as something to be assessed not by its success in achieving objectives, but by the objectives chosen and the way in which they were pursued.<sup>3</sup>

**Notes**

1. See Jonathan Barnes, Susanne Bobzien, Kevin Flannery, Katerina Ierodiakonou, in Introduction to *Alexander of Aphrodisias: On Aristotle Prior Analytics 1.1-7* (Duckworth 1991). Cf. S. Bobzien, ‘Stoic syllogistic’, *Oxford Studies in Ancient Philosophy* 14 (1996) 133-92; M. Frede, ‘Stoic vs. Aristotelian syllogistic’, *Archiv für Geschichte der Philosophie* 56 (1974) 1-32, repr. in his *Essays in Ancient Philosophy* (Minneapolis 1987); Mario Mignucci, ‘Alexander of Aphrodisias on inference and syllogism’, in I. Angelelli (ed.) *Estudios de Historia de la Logica*, Actas del II Simposio de Historia de la Logica, Pamplona 1990, 381-412; Ian Mueller, ‘Stoic and Peripatetic logic’, *Archiv für Geschichte der Philosophie* 51 (1969) 173-87.
2. On the Stoics: Catherine Atherton, *The Stoics on Ambiguity* (Cambridge 1993). On Aristotle and his commentators: John P. Anton, ‘Ancient Interpretations of Aristotle’s doctrine of *homonyma* in the *Categories* and its Platonic Antecedents’, *Journal of the History of Philosophy* 6 (1968) 315-26; John P. Anton, ‘Ancient Interpretations of Aristotle’s doctrine of homonymy’, *Journal of the History of Philosophy* 1969, 1-18; Jonathan Barnes, ‘Homonymy in Aristotle and Speusippus’, *Classical Quarterly* 21 (1971) 65-80; Sten Ebbesen, *Corpus Latinum Commentariorum in Aristotelem Graecorum* 7,1-3 *Commentators and Commentaries on Aristotle’s Sophistici Elenchi* (vol. 1, Brill, Leiden 1981) 159-62, 181-6; Sten Ebbesen, ‘Les Grecs et l’ambiguité’, in Irène Rosier (ed.) *Cinq Études Historiques* Lille 1988, 15-32; Christos Evangelou, *Aristotle’s Categories and Porphyry* (Leiden 1988) 37-51; Philippe Hoffmann, *Annuaire, École Pratique des Hautes Études* vol. 93 (1984-5) 345-56; L. Tarán, ‘Speusippus and Aristotle on homonymy and synonymy’, *Hermes* 106 (1978) 73-99.
3. Katerina Ierodiakonou, ‘Alexander of Aphrodisias on medicine as a stochastic art’, in Ph.J. van der Eijk et al. (eds), *Ancient Medicine in its Socio-Cultural Context* (vol. 2 Amsterdam 1995) 473-86.

## Textual Emendations

3,30      Reading *katauto* (i.e. *kat' auto*) for *kathauto* (i.e. *kath' hauto*) [n. 72]

5,27-9     Retaining *axiousi ... epigraphesthai* and emending  
              *eniote hosa anankaia* to *einai te ouk anankaion* (or to  
              *enioi te hoti ouk anankaion*) [n. 110]

5,28-9     Reading *ex endoxôn de eirêke hoti oukh* for *ou gar* [n. 111]

6,9        Removing brackets, to add *on* after *phusin* [n. 115]

13,22      Reading OPOIAS as *ho poias* with Wallies [n. 175]

14,14      Emending *to (mê) tethnêkenai* to *ou mê tethnêkenai* [n. 180]

17,13-14    Discussed in n. 195

18,31      Read <*to*> *to haireton agathon einai* [n. 201]

19,2        Perhaps reading *ê* for *kai* [n. 202]

19,5        Perhaps reading *kai to houtôs <ekhon> endoxon*  
              (Abbamonte) [n. 205]

20,10      Reading *ti* for *to* (or delete) [n. 216]

22,10      Reading (perhaps) *hulês* for *hulas* [n. 238]

24,1-2     Deleting second *tôn* (typesetting error [n. 251])

24,18      Perhaps reading *hôn* for *hôi* [n. 254]

26,10      Perhaps reading *tina* for *tini* [n. 260]

27,14      Perhaps reading *tote tosauta biblia* for *tote toiauta biblia*  
              [n. 268]

28,10.15    Emending *phusin* to *genesin* [n. 276]

32,11      Phrase in sequel to lemma bracketed by Brunschwig [n.  
              292]

34,16      Reading *protheis* for *prostheis* [n. 299]

43,32      Deleting *ho* [n. 357]

45,5        Lacuna filled by Wallies [n. 365]

47,6        Lacuna filled by Wallies [n. 374]

49,29      Not adding a second *rhis* (Wallies) [n. 391]

54,12      Reading *êi ê* rather than, with Wallies, *êi* for the *eiê* of  
              the MSS, here and at line 14 [n. 424]

55,20      Adopting *ou* from MS B and perhaps adding *panta* [n. 442]

58,4-5     Deleting *sémainomenois*, following Wallies [n. 468]

59,7        Repunctuating the *ê ... ê* clause changing period to  
              comma [n. 475]

60,23      Emending *autês* to *autôn* [n. 482]

61,19      Reading, with Wallies, *hautou* for *autou* without adding  
              *auto* [n. 488]

62,19 Bracketing *problémati* [n. 495]  
 63,30 Repunctuating (comma, not full stop after *ou*) [n. 504]  
 64,12-13 Transposing *tōi hou katēgoreitai* with *ê katēgoroumenon monon* [n. 505]  
 66,1 Adding *hôste estai* with Wallies and perhaps *horika* [n. 521]  
 66,22 Emending *genous* for *genos* [n. 530]  
 67,2 Supplying the conjunction in the sequel to the lemma  
     with Prantl [n. 536]  
 67,18 Emending *tini* to *tina* [n. 546]  
 71,17 Perhaps reading *toiouton hoion ei* for *toiouton ei* [n. 569]  
 72,10 Deleting part of clause with Wallies [n. 578]  
 72,20 Reading *enantion* for *enantîon* [n. 581]  
 73,13 Reading AUTE as *autê*, not *hautê* [n. 588]  
 78,19 Supplying <*oute haplôs adoxon*> with Wallies [n. 650]  
 78,22 Reading *enantîon* for *enantion* [lemma] with Pacius [n.  
     653]  
 80,4 Perhaps reading *ex hautou* rather than *ex autou* [n. 661]  
 80,25 Perhaps reading *mêde* for *mête* [n. 666]  
 80,28 Emending *grammatikon* to *grammatikên* [n. 668]  
 81,6 I suggest bracketing *axia zêteseôs einai* as a gloss [n. 676]  
 82,23 Emending *hoi aitountes* to *diairountes* and deleting *tas*  
     [n. 689]  
 85,3 Bracketing *estin* [n. 701]  
 86,4 Bracketing *te* [n. 704]  
 86,5 Retaining MS reading without Wallies' addition of *ouk*  
     [n. 708]  
 87,9 Perhaps reading *paralambanein* [n. 718]  
 87,10 Reading *tou* with the MSS, not *tōi* with Wallies [n. 719]  
 87,13 Emending *autou* to *ou tou to* [n. 722]  
 94,15 Emending *pros(ti)theis* to *protitheis* [n. 800]  
 101,28 *ou. hoti ên tauta hetera allêlon* bracketed by Wallies [n.  
     858]  
 102,15 Perhaps reading *legetai gar <aisthanesthai kai to ekhein  
     aisthêsin kai>* to [n. 864]  
 102,21-2 Emending *amesôn/emmesôn* to *ana meson* [n. 867]  
 103,6 Reading *hoti* rather than *hote* [n. 870]  
 103,9 Emending *ep'* to *ap'* [n. 871]  
 104,15 Reading *tou dikaiion, <mousikon>* with Wallies [n. 881]  
 104,26 Repunctuating with a full stop after *dikaion* [n. 882]  
 106,8 Perhaps emending *tosouton* to *toiouton* [n. 892]  
 110,20 Retaining *ekhein* with A against Wallies' *ekhon* [n. 936]  
 114,14 Emending *idiou* to *idion* [n. 958]  
 117,20,25 Emending *ti* to *ei ti* [n. 981]  
 118,10 Perhaps deleting *genos* [n. 983]

Alexander of Aphrodisias  
*On Aristotle Topics 1*

Translation

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Alexander of Aphrodisias' <commentary> on the 1,1  
first <book> of Aristotle's treatise on topoi

**<1.1 (1) The purpose of the *Topics*>**

[100a18 The purpose of this study is to find a method by which we shall be able to syllogize about every problem<sup>1</sup> that has been put forward from things approved, and when we ourselves are upholding a claim shall say nothing contrary to it.] (100a18-21)<sup>2</sup>

Aristotle himself states the purpose<sup>3</sup> of the treatise<sup>4</sup> on 'topics',<sup>5</sup> and the number and kinds of things for which this method is useful<sup>6</sup> to the practising philosopher, and what is its goal. He does so partly at the very outset and partly a little further on,<sup>7</sup> where he gives us to understand that dialectic<sup>8</sup> is worth taking trouble even for those whose primary pursuit is philosophy, since it contributes to finding the truth, which is the goal of philosophical study. 5

**<1.1 (2) Dialectic defined>**

It is well for us to know beforehand that the name of dialectic is not by all philosophers brought to bear on the same thing meant.<sup>9</sup> The Stoics, who define dialectic as the knowledge of speaking well, and posit that speaking well consists in saying the things that are true and fitting,<sup>10</sup> which they take to be a distinctive property<sup>11</sup> of the philosopher, make it refer to the most complete (and perfect) philosophy.<sup>12</sup> This is why according to them only the wise man<sup>13</sup> is a dialectician. Plato, who extols the method of division<sup>14</sup> and declares it the coping-stone of philosophy,<sup>15</sup> also calls it by the name of dialectic.<sup>16</sup> He posits as its function the ability to make one thing into many and reduce the many to one, which seems equivalent to being able to divide genera into their species and what comes under these, and conversely to put the individual things together, reduce them to one genus and bring them under one heading. 10

Aristotle and his school do not offer the same view of dialectic. They posit that it is a method of syllogizing,<sup>17</sup> holding that one syllogism<sup>18</sup> does not differ from another as a syllogism,<sup>19</sup> but only in the form of its premisses,<sup>20</sup> in its modes<sup>21</sup> and figures,<sup>22</sup> and in the subject-matter it deals with. The first of these differences makes some syllogisms 15 2,1 5

probative<sup>23</sup> – those we call categorical<sup>24</sup> – and others hypothetical.<sup>25</sup> The second differentiates between<sup>26</sup> perfect<sup>27</sup> and imperfect (syllogisms), and between those in the first, second and third figure,<sup>28</sup> as is shown in the *Prior Analytics*.<sup>29</sup> For the syllogisms declaring

10 Every human being is capable of laughter,

Nothing capable of laughter is a horse,

and

Every human being is capable of laughter,

No horse is capable of laughter,

and

Everything capable of laughter is a human being,

Nothing capable of laughter is a horse

have the same subject-matter but are not identical, due to the different obtaining<sup>30</sup> and positing of their premisses. The first is in the first figure,<sup>31</sup> the second in the second, the third in the third figure.<sup>32</sup> And

15 the third difference, that in subject-matter,<sup>33</sup> makes some syllogisms demonstrative, others dialectical,<sup>34</sup> others again contentious.<sup>35</sup> For just as the crafts<sup>36</sup> do not differ from each other as crafts, but take their difference from the different matter they deal with and the way they deal with it – which makes one of them carpentry, another house-building, and a third something else – so it is with syllogisms.

20 The one that proves<sup>37</sup> and deduces<sup>38</sup> the point at issue<sup>39</sup> from what is true<sup>40</sup> and appropriate to it,<sup>41</sup> as well as prior<sup>42</sup> and better-known,<sup>43</sup> is called by the older authors<sup>44</sup> a demonstrative syllogism, and they call the method of syllogizing through these things ‘demonstration’.<sup>45</sup> That which proceeds through what is approved<sup>46</sup> they call a dialectical syllogism, and the method of syllogizing through this they accordingly

25 call ‘dialectic’. And that which syllogizes from what only look like things approved they call a sophistic syllogism, and the method which uses these they call ‘sophistic’.<sup>47</sup> For there is no difference in form<sup>48</sup> between the syllogism<sup>49</sup> which says

Pleasure is incomplete

Nothing that is good is incomplete

and that which says

The good makes men good

Pleasure does not make men good

since both are in the second figure; they differ in subject-matter. The first purports to be demonstrative, for it has its starting-point in a definition<sup>50</sup> that has been given of pleasure which says that pleasure is a perceptible process to a natural state,<sup>51</sup> and any process is incomplete. The second one proceeds through what is approved, for the claim that the good makes men good, while not true, is approved.<sup>52</sup>

5 Applying the name of dialectic to the method which syllogizes in this way and through such things, they accordingly define dialectic as the method of syllogizing about every issue through things ap-

proved. Such a method is plausibly called dialectic: for if ‘dialectic’ is derived from *dialegesthai* ‘to converse’ and *dialegesthai* consists in question and answer,<sup>53</sup> and the questioner asks questions about every problem raised<sup>54</sup> by the answerer, so as to syllogize always through what<sup>55</sup> he has obtained<sup>56</sup> from his questioning, then he will, insofar as he tries to syllogize about everything put forward,<sup>57</sup> not syllogize from what is true.<sup>58</sup> For not all that is put forward<sup>59</sup> is true: opposites<sup>60</sup> are put forward, e.g. that pleasure is good and that it is not good, and that the soul is immortal and that it is not immortal; yet a pair of opposites cannot both of them be true. Nor is it possible to infer syllogistically what is untrue through things which are true: all that is proved through what is true is itself true.<sup>61</sup> In so far, then, as the dialectician syllogizes from the concessions he gets out of his questions, he syllogizes from what is approved, for answerers grant and concede what is approved and persuasive.<sup>62</sup> But not all that is approved is also true in the strict sense:<sup>63</sup> it is the task of questioners to lead their respondents into paradoxical answers as well as into contradiction. So dialectic does not have its being<sup>64</sup> in syllogizing through what is true but through what is approved. Therefore those who make<sup>65</sup> it bear on a different thing meant<sup>66</sup> use the name dialectic inappropriately.<sup>67</sup>

### <1.1 (3) Dialectic and rhetoric >

Seeing that dialectic is like this, it is plausible that Aristotle calls it a counterpart to rhetoric,<sup>68</sup> since that too involves what is persuasive because it is approved.<sup>69</sup> By ‘counterpart’ he means corresponding, and revolving and moving around the same things:<sup>70</sup> for these are not like the sciences each about one determinate genus of things, proving and obtaining the things that are peculiar<sup>71</sup> to that genus and hold of it as a genus,<sup>72</sup> and doing so through the principles appropriate to that genus. The subject of either of these two is not any one genus, and their proofs about the subject of their argument are not produced through what is appropriate to this object and in its essence.<sup>73</sup> Their inquiry<sup>74</sup> is into things common to several genera: it is just as much the task of the dialectician to attack by argument about questions of music<sup>75</sup> as of medicine,<sup>76</sup> of geometry,<sup>77</sup> physical science, ethics, logic,<sup>78</sup> and about all that is put forward; and their proofs are through what is common and approved, and not peculiar to the issues. For the dialectician does not prove a medical thesis through medical principles – that is a physician’s task – or questions of geometry from principles of geometry – if he did he would be a geometrician. His distinctive property<sup>79</sup> is to syllogize about everything that is put forward through what is approved. What these things approved are will be known a little later.

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The orator, though he does not speak about everything as the dialectician does, is not concerned with one determinate genus of things either. He too discusses questions of medicine, of philosophy and of music, but mostly of politics,<sup>80</sup> for questions of civil conduct and political action<sup>81</sup> are considered to be the peculiar subject-matter of

15 the orator. And, like the dialectician, he will develop his argumentative attacks on all his subjects from what is persuasive and approved, for he too attacks by argument on opposite sides of a question<sup>82</sup> and proves the same thing now noble, now ignoble; now expedient, now inexpedient; now just, now unjust. So they have this too in common,

20 that they use their capacity to support both of a pair of opposites. Practitioners of a science have a discernment of opposites, but their scientific aim is determinately<sup>83</sup> one of the two opposites: the better part. The physician's task is to heal, the massager's to bring fitness about, and so determinately one thing for each: the better part of the

25 opposites that he deals with. For their discernment of what is opposed to the better part does not precede but follow upon<sup>84</sup> their discernment of this better part: the discernment of what is capable of causing sickness follows upon the scientific knowledge of what produces health. But the dialectician and the orator share the aim of proving opposites. This is why they<sup>85</sup> call these arts capacities, since what is

30 capable in the strict sense is capable of two opposites. There are those who claim they are called capacities because they put their users in a position of capability and superiority, since the many hold such men in admiration as being more capable than others, as well as because their possessors are capable of using them both for good and for evil<sup>86</sup> – this, they say, is why things instrumental to good<sup>87</sup> are also called

5,1 capacities. But even though all these features too attend them, still they are capacities in the strict sense because they are equally capable of both of a pair of opposites, since the dialectician does not as a dialectician infer one thing rather than its opposite, and so it is with the orator. Characteristics common to them are: that they do not treat one determinate genus of things;<sup>88</sup> that they proceed through what is approved and persuasive, not through principles peculiar to the issue; and that they are applied to both of a pair of opposites.<sup>89</sup>

Differences between them <i.e. dialectic and rhetoric> are: that the capacity of dialectic is applied to every subject-matter; that the speeches it produces are not continuous<sup>90</sup> but in question and answer – the origin of its name<sup>91</sup> – and that the assertions<sup>92</sup> it makes are more universal and general. Rhetoric is not to the same extent applied to every subject-matter but more to politics, as we have said before;<sup>93</sup> it uses for the most part continuous speech; and it speaks more about individual things: it frames speeches with reference to circumstances,<sup>94</sup> chance events, junctures,<sup>95</sup> persons, places<sup>96</sup> and the like,

which are all individual.<sup>97</sup> For lawsuits and speeches of counsel and 15  
of praise<sup>98</sup> are about these things.

### <1.1 (4) What is a ‘topic’?>

Dialectic thus called is dealt with in other books by Aristotle,<sup>99</sup> but most of all in these, entitled *Topics* from the fact that in them certain ‘topics’ are offered,<sup>100</sup> starting from which ‘we shall be able to syllogize about everything that has been put forward through things approved’, as Aristotle himself says.<sup>101</sup> For the topic, as Theophrastus says,<sup>102</sup> ‘is a starting-point<sup>103</sup> or element from which we take the starting-points concerning each matter by focusing our thought upon it. It is delimited in compass – for either it includes those common and universal things<sup>104</sup> which are the principal ingredients<sup>105</sup> of syllogisms, or these are at least capable of being proved and obtained from them<sup>106</sup> – but unlimited as to the number of individual instances which come under it’.<sup>107</sup> For starting from these one may be supplied with an approved premiss with respect to the issue: for this is the starting-point.<sup>108</sup> Some postulate that the first book should not be entitled *Topics* but *Preliminary to the Topics*,<sup>109</sup> and that the ‘from things approved’ is not necessary,<sup>110</sup> but Aristotle says ‘from things approved’ because<sup>111</sup> it is not possible to syllogize about everything that is put forward from things true, as we have said before.<sup>112</sup> For that pleasure is good as a goal cannot be proved through what is true, since what is to be proved is itself not true, but it can be through what is approved: for if we assume<sup>113</sup> that everything which is choice-worthy, and is so not on account of something else but of itself, is a final good, and if we co-assume that ‘pleasure is of this nature’, which is something approved, then we shall deduce the point at issue. Again, if we assume that what is chosen by all living beings whether brute or rational is most in accordance with nature, and that what is most in accordance with nature is most final,<sup>114</sup> and if after inferring syllogistically that what is chosen by all living beings whether brute or rational is [most according to nature]<sup>115</sup> most final, we co-assume that they all, whether brute or rational, choose pleasure, we will have deduced syllogistically the same conclusion. For since it is for the dialectician to syllogize about everything, and since everything includes things which are untrue, and what is untrue cannot be inferred syllogistically from what is true, it is clear that he will deduce syllogistically (the solution to) problems<sup>116</sup> of this kind not through what is true but what is approved – for it is not impossible for things to be at once untrue and approved. If, on the other hand, he syllogizes not from the approved but from what merely look like things approved, he will not be a dialectician but a sophist, as Aristotle has

shown in his *Sophistical Refutations*. But the treatise before us is on dialectic.

The addition ‘about everything’<sup>117</sup> in a way sets dialectic apart from rhetoric, for rhetoric is not to the same extent a method of syllogizing about every problem: problems of ethics and politics are more the orator’s subject-matter, as we have said before,<sup>118</sup> and rhetoric too tries to prove<sup>119</sup> these through what is approved. But Aristotle has used the more general (expression) ‘about everything,’ inasmuch as the dialectician discusses problems of physical science and of logic as well as of ethics. These, however, include non-dialectical problems, which it is clearly not for the dialectician to pronounce on, so Aristotle does not say ‘about all things’ without qualification. For the dialectician does not speak about the ‘things that call for sense-perception or for punishment’,<sup>120</sup> nor about those ‘whose demonstration is near at hand, nor those of which it is too far removed’,<sup>121</sup> as Aristotle himself will say later on<sup>122</sup> when he speaks of the dialectical problem. Or he does not discuss these because they are not even problems to begin with. What he says is ‘about every problem put forward’, evidently implying every dialectical problem.

### <1.1 (5) The syllogism defined and distinguished from other types of argument>

**100a21** First, then, we have to say what a syllogism is [and what differences there are within the syllogism, so that we may grasp the dialectical syllogism – for that is the object of the inquiry now before us.] (100a21-4)

After saying that the purpose is to syllogize through what is approved about every problem that is put forward, Aristotle plausibly begins by saying what a syllogism is. Next he will mention the differences<sup>123</sup> of the syllogisms, to make it evident what kind of a syllogism the dialectical syllogism is which comes about through what is approved – the one we are now studying – and what makes it different from others.

**100a25** Now a syllogism is an utterance in which, certain things having been posited, [something different from these suppositions comes about by necessity through the suppositions.] (100a25-7)

10 We have discussed the definition of the syllogism, and the puzzles that some authors have raised in connection with it, in our commentary on the *Prior Analytics*,<sup>124</sup> for in that work, in which Aristotle offers the entire syllogistic method, the account of the syllogism is

primary,<sup>125</sup> but we shall here recall those parts of our discussion that contribute towards distinctness of the definition.

The genus<sup>126</sup> in which he puts the syllogism is the utterance, since utterance, while predicated synonymously<sup>127</sup> of the syllogism, is not predicated of that alone but also of other species than the syllogism: it is also predicated, both synonymously and in their what-it-is,<sup>128</sup> of story, narration, public speaking and countless other things all differing in species. By the differences<sup>129</sup> he adds to ‘utterance’ he sets the syllogism apart from other utterances and makes plain what its being consists in: he says it is that utterance in which ‘certain things having been posited, something different from these suppositions comes about by necessity through the suppositions’, and so by ‘having been posited’ sets it apart from other utterances in which nothing is posited,<sup>130</sup> for instance narrative.

What Aristotle means by ‘having been posited’ is ‘having been obtained<sup>131</sup> and agreed to and conceded’ – i.e. conceded either by the interlocutor, if the syllogism is addressed to another person,<sup>132</sup> or by the author of the syllogism himself, if he is framing a syllogistic proof on his own.<sup>133</sup> For someone who is framing proofs by himself also has to obtain things and concede things as being the case, and then taking these things as agreed prove something else through them. That his use of the word ‘having been posited’ is correct can be seen from the fact that you cannot replace it by one more apt for signifying this. What is conceded and obtained is not invariably in the affirmative. Negatives are posited and conceded no less than affirmatives, and the syllogism does not require that all the suppositions are invariably affirmative.

It is also possible that ‘having been posited’ connotes that we have categorical predications,<sup>134</sup> for strictly speaking it is these that they posit so as to be obtained<sup>135</sup> in (claims about one thing) holding or not holding (of another): hypotheticals are not posited but supposed.<sup>136</sup> For in Aristotle’s view categorical syllogisms, as he shows in the *Prior Analytics*,<sup>137</sup> are syllogisms in the strict sense without qualification, whereas hypothetical syllogisms are not syllogisms without qualification but only with an addition.<sup>138</sup> In this way he seems to be giving the account of the syllogism in the strict sense without qualification.

He says ‘things having been posited’, not ‘thing –’,<sup>139</sup> as critics of this formula claim that he should have, because nothing is proved syllogistically through just one assumption being obtained, but everything from at least two. For what Antipater<sup>140</sup> calls ‘single-assumption syllogisms’,<sup>141</sup> such as

It is day

Therefore: It is light

and

You breathe

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Therefore: you are alive  
 are not syllogisms but cases of deficient questioning.<sup>142</sup> The syllogistic proof that

It is light  
 is on the grounds that  
 It is light if it is day  
 and  
 It is day

20 and the conclusion that  
 You are alive  
 is deduced from the fact that  
 He who breathes is alive  
 and that  
 You are breathing  
 or because  
 Everyone who breathes is alive  
 and  
 You are breathing;  
 that  
 It is light  
 does not simply follow from  
 It is day,  
 nor that  
 You are alive  
 from  
 You are breathing.

At any rate, in cases where the conditional is not known, just to obtain the co-assumption is not enough to establish the conclusion: from

25 Movement exists  
 it does not seem to follow that  
 Empty space does not exist  
 because the conditional  
 If movement exists, then empty space does not exist  
 is not something well-known, even though Aristotle has proved that it is true.<sup>143</sup> So when people believe they are syllogizing through just one thing posited, they are making use of the circumstance that the conditional is well-known and evident or the universal premiss is obvious.<sup>144</sup> The most obvious sign of this is that the utterance does  
 30 not come to be redundant<sup>145</sup> when you obtain<sup>146</sup> the conditional along with it, as in  
 If it is day, it is light  
 But it is day  
 9,1 Therefore: it is light.  
 Yet if it can be proved that it is light through 'it is day', then the conditional comes to be redundant, for what is added from outside to

what already makes up a syllogistic proof is redundant with a view to proving the conclusion. But the fact that (the addition)<sup>147</sup> is not redundant in this latter argument shows that the argument and the syllogism is lacking something and is defective in the former.<sup>148</sup> For if one thing follows from another necessarily, it does not thereby invariably also follow syllogistically: the fact that what follows syllogistically follows necessarily, does not yet make all that follows from a thing necessarily also follow from it syllogistically. The two do not convert; ‘necessary’ has a wider extension than just the necessity of syllogisms.<sup>149</sup>

Rhetorical syllogisms, which we call enthymemes,<sup>150</sup> are also of this kind.<sup>151</sup> Here too a syllogism appears to come about through one premiss, because the other one is known and added by the jury or audience. An example is

This man deserves to be punished, for he is a traitor;  
for the juror adds, as something evident, that every traitor deserves to be punished, since he already has that which is declared and affirmed by the law. Therefore these are not syllogisms in the strict sense either: the name ‘rhetorical syllogism’ belongs to them as a whole.<sup>152</sup> In those instances in which what is omitted is not something known, it is no longer possible to frame a syllogism through enthymeme. Indeed by its very name the syllogism seems to signify a putting together of utterances (*logoi*),<sup>153</sup> just as computation (*sumpsēphismos*) signifies a putting together of counters (*psēphoi*).

The addition that what is deduced ought to be ‘different from the suppositions’ shows that syllogisms are useful and needed.<sup>154</sup> By this addition Aristotle effectively shows that the syllogism is an instrument. The use of the syllogism is to make obvious what is not held to be known through things that are known and obvious; so if it is not possible for a thing to be at once clear and unclear, then the use of the syllogism does not seem to be preserved in cases where what is proved is not different from the things that prove it. But an argument which does not provide the use of the syllogism is not a syllogism, for if the syllogism is an instrument, and every instrument is useful, then the syllogism is useful, but arguments in which what is inferred is the same as one of suppositions are not useful: therefore arguments in which what is inferred is the same as one of the suppositions are not syllogisms. That instruments are useful is clear: with all instruments we see that they are discarded when they cannot provide the use that is appropriate to them. A lyre that cannot be used for music would not be called a lyre, nor an adze that cannot be used for carpentry an adze; if we go on calling them by the same name when they lose their use we are speaking homonymously,<sup>155</sup> as with engraved or moulded figures such as a hand made of stone.<sup>156</sup> No more would a syllogism still be a syllogism that does not preserve the use

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of a syllogism. And syllogisms in which the conclusion is the same as one of the suppositions are of this sort, for instance those which the Stoics call duplicating<sup>157</sup> syllogisms and those they call non-differently concluding.<sup>158</sup> A duplicating syllogism according to them is one of the form

If it is day, it is day

But it is day

10 Therefore: it is day.

A non-differently concluding syllogism is one in which the conclusion is the same as one of the assumptions, as in

Either it is day or it is night

It is day

Therefore: it is day.

So if someone calls arguments of this type syllogisms too, he is speaking homonymously, for it is quite absurd to say of what is already a supposition that it is deduced and proved. To do this is to

15 beg the question, for someone who already takes what is to be proved for granted in the premisses that should first prove it, is begging the question.<sup>159</sup> It is also absurd to deny the name of induction to one in which the conclusion is the same as one of the things obtained in order to prove it, on the ground that it does not provide the use served by induction, and yet to grant the name of syllogism to one that does not prove anything. The form of the wording is not enough to produce a

20 syllogism,<sup>160</sup> first of all what is meant by this wording has to be capable of proving something. With other instruments too, the form is not enough to manifest the nature of the instrument; this also requires the appropriate material, with which it<sup>161</sup> will produce its peculiar effect. Thus the saw requires this particular material: no one

25 will apply the word ‘saw’ to something of wax that merely has the form of a saw. The definition of the syllogism too, which is also an instrument, needs to include the matter appropriate to one. That an

argument which infers one of the suppositions is useless is also clear from the fact that it cannot be used either for demonstrative proof or for the dialectical or for the sophistic syllogism, which are all the species of the syllogism.<sup>162</sup> Also the duplicating syllogisms are non-

30 syllogistic insofar as they either co-assume both the antecedent and the consequent or co-assume the consequent – for why should we say they assume the antecedent rather than the consequent?<sup>163</sup>

11,1 Disjunctive syllogisms from a contradictory pair<sup>164</sup> do not infer what is the same as one of the suppositions, but what is the contradictory of its alternative. It happens accidentally, because the disjunctive part consists of these components, that this is the same as the co-assumption; at any rate with disjunctive syllogisms which do not consist of such components as these,<sup>165</sup> one that does not infer what is the contradictory of the alternative is non-syllogistic. Indeed we do

not even consider that which from the disjunction and one of the disjuncts<sup>166</sup> infers the other disjunct to be a syllogism. For since in a syllogism through such a disjunction<sup>167</sup> an accidental of what is inferred, which is the contradictory of the other disjunct, is that it is the same in wording as the co-assumption – and being the contradictory of the remaining disjunct is not the same thing as being the same as the co-assumption, nor does it apply in virtue of the same thing – we should find out in virtue of which of these two accidentals that have come to coincide in it we assume this (premiss) and thereby make the argument syllogistic. That these two are not the same thing and that they do not hold of the premiss in virtue of the same thing is clear from the fact that they do not both hold of the same premiss in all disjunctives. By contrast if they were the same, i.e. if being the contradictory of the one disjunct and being the same as the other disjunct were the same thing, then in anything in which the one held, the other would hold too; but if there are disjuncts of which being the contradictory of the other disjunct does hold but being the same as the co-assumption does not hold, then it cannot be the same thing in disjunctives to be the contradictory of the other disjunct and to be the same as the co-assumption. And so even where these two hold of something at the same time, they do not hold of it at the same time as being the same as each other. And if they are not the same, we should find out in virtue of which of the two the inference is made so as to yield the syllogism. Now this is something one could take from the outline<sup>168</sup> of the species of the syllogism, and the outline of this type of syllogism is: ‘that which from a disjunctive and one of the disjuncts infers the contradictory of the remaining disjunct.’<sup>169</sup> But if this is so, then clearly the syllogism results from the conclusion being obtained as the contradictory of the disjunct, not as being the same as the co-assumption – that is not the purport of the outline. For just as, in arguments where the co-assumption is different from the contradictory of one disjunct, the syllogism that infers the contradictory of one disjunct conforms to the outline of the syllogism that is supposed and syllogizes in accordance with it, but that which infers the co-assumption neither conforms to the outline nor syllogizes, except in the case that the co-assumption and the contradictory of one disjunct in them are the same – just so in those arguments in which these two have in fact come to coincide, the syllogism seems to come about by the fact that the conclusion is obtained as the contrary of the other disjunct, not as being the same as the co-assumption.

That the conclusion in these syllogisms is not even the same as the co-assumption may be gathered from the following. In disjunctive (syllogisms) that do not consist of contradictory opposites, e.g. ‘Either it is day or it is night’, the opposite of ‘It is night’, which is ‘It is not night’, signifies that it is day but, because this is not its primary

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meaning,<sup>170</sup> is not held to be the same as the co-assumption ‘It is day’ – it is not the fact that ‘It is not night’ differs from ‘It is day’ in wording that prevents their being the same, since utterances in which components that differ in wording are alike in primarily making plain<sup>171</sup> the same thing, make up the same proposition even if they contain a different word: ‘That man has a dagger’ and ‘That man has a knife’, if they are spoken of the same person, are the same proposition, since ‘dagger’ and ‘knife’ serve primarily to point out the same thing.<sup>172</sup> In this way, even though ‘It is not night’ signifies that it is day just as much as ‘It is day’ does, the propositions saying ‘It is day’ and ‘It is not night’ cannot be different on account of the difference in wording between them, but it is because the pair ‘It is day’ and ‘It is not night’ do not have the same primary meaning that they are not the same but different: ‘It is day’ primarily affirms that it is day and only accidentally affirms that it is night, but that it is not night primarily denies night and only accidentally affirms day by the fact that if it is not night, it necessarily is day.<sup>173</sup> Now just as with these, so it is also in the disjunctive mentioned before with ‘It is day’, i.e. with what is co-assumed and what is inferred: they are not assumed to be true as primarily signifying the same thing. And if that is so, then it seems they are not the same without qualification just because they are the same in wording, but are different because they do not primarily point out the same thing. For that sameness of wording is not enough to produce the same proposition, just as difference of wording is not enough to produce a different one, is made clear by instances of homonymy; and that the two are not assumed as making plain the same thing is clear from the fact that what is assumed in the co-assumption ‘It is day’ is co-assumed as primarily pointing out that it is day, but what is inferred is inferred as what denies ‘It is not day’, and so as being equivalent to ‘Therefore it is not the case that it is not day.’<sup>174</sup> Just as this, then, does not primarily affirm that it is day, but deny ‘It is not day’, so ‘But it is day’ denies the alternative assumption; for it is assumed in the inference as denying this, and it is not the same thing whether it is used as what denies that it is not day or as affirming that it is day: one who uses it to deny that it is not day would, if the denial of that were something other than that it is day, have used that instead of this, whereas one who wishes to signify that it is day would not use any other (expression) than the one that makes plain just this.

The addition of ‘by necessity’ in the definition sets the syllogism apart from induction, for the induction too is an utterance ‘in which, certain things having posited, something different from these suppositions follows’, but not ‘by necessity’, since what is proved in inductions is not necessary, on the ground that it is neither possible to obtain all the instances through which the proof of the point at issue

is established, nor possible, if these have not all been obtained, to claim that the universal too is of necessity just as was each of the instances that were obtained. For this ‘come about by necessity’ does not make plain that the conclusion in syllogisms is necessary – for not all syllogisms have a necessary conclusion: in many of them the conclusion is contingent, since from contingent premisses we get a contingent conclusion – but ‘by necessity’ makes plain that what is proved through the premisses follows from them by necessity, i.e. what<sup>175</sup> relation holds between these suppositions and the conclusion; if what is inferred did not follow by necessity from what was posited, then even if it were itself necessary, this would still not be a syllogism.

The addition of ‘through the suppositions’<sup>176</sup> seems to be separating from the syllogisms not only what are called single-assumption arguments – for here what is inferred from the suppositions is not proved ‘through the suppositions’: what they are lacking with respect to syllogistic proof, as we have said before,<sup>177</sup> is the part omitted – but also arguments containing redundant elements,<sup>178</sup> since arguments in which a redundant premiss has been obtained do not deduce the conclusion ‘through the suppositions’, given that even when this premiss has been removed it is still possible to derive the same conclusion. For if from the (premisses)

Everything just is noble  
and

Everything noble is good  
is deduced

Everything just is good  
then it is redundant with a view to proof of the same conclusion to  
add the premiss

Everything good is to be chosen for its own sake  
or any other premiss. But arguments in which what is inferred is not the conclusion appropriate to them, but something else that follows from that or is an accidental of it, are not syllogisms either, since they are not ‘through the suppositions’. For instance if one had obtained that pleasure is according to nature and that what is according to nature is to be chosen, and then concluded that pleasure is good: for this is not what is proved from the suppositions, even if it follows necessarily from what is deduced from them. One argument like this is that of Epicurus about death: from premisses stating

What is dissolved is without perception  
and

What is without perception is nothing to us  
what may be deduced is not, as he believes,

Death is nothing to us  
but

What is dissolved is nothing to us.

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And death is not even what is dissolved, it is dissolution, and someone who has granted that what is dissolved is without perception has not also granted that dissolution proceeds without perception; dissolution to a living being – which is what dying is – is not without perception.<sup>179</sup> And that is why dying and not having died<sup>180</sup> is something to us, even though dying is not always something to us.<sup>181</sup> It is also why there is  
 15 death in two senses, either that which has occurred or that which is occurring: that which has occurred may not be anything to us, but that which is occurring is something to us, and this is in fact the one we fear.

But those arguments in which no premiss has been obtained universally are not syllogisms either, for in these too what is proved is not proved ‘through the suppositions’ but on the strength of the universal premiss which has been omitted. The arguments that the  
 20 Stoics say ‘conclude unmethodically’ are of this sort:<sup>182</sup> for if

A equals B<sup>183</sup>

and similarly

C equals B

it has not thereby been syllogistically proved that

A equals C<sup>184</sup>

since the necessity of this is not ‘through the suppositions’: the conclusion only follows from the suppositions on the strength of the truth of the universal that

Things equal to the same thing are also equal to one another.<sup>185</sup>

25 This is why when this has been affirmed and the divided premiss is put and brought together into the one premiss ‘A and C are equal to the same thing, B,’ it can now be deduced syllogistically that A equals C. And so it is with saying

It is day

But you say that it is day

Therefore: you are speaking the truth.<sup>186</sup>

Here too, what has been inferred does indeed follow from the things  
 30 posited, yet its necessity does not rest on these but on the truth of the universal

Everyone who when it is day says that it is day is speaking the  
 15,1 truth.

For when that has been obtained, then if one combines the things posited into one proposition

You are saying while it is day that it is day  
 he will deduce syllogistically

Therefore: you are speaking the truth.

For in all arguments of this sort the universal, while it is true, has been omitted, and the other premiss is divided into two or more, as in the following argument:

Law is contrary to lawlessness

Law is not an evil  
 Lawlessness is an evil  
 Therefore: law is a good.

Here the universal

What is not an evil and is contrary to an evil is good  
 has been omitted, and the other premiss

Law is not an evil, and is contrary to lawlessness which is an evil  
 has been divided into the three parts (1) Law is contrary to lawlessness,  
 (2) Law is not an evil, and (3) Lawlessness is an evil. That law  
 is good can be deduced syllogistically from the two premisses men-  
 tioned above, not from the one divided into three.

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**<1.1 (6) Species of syllogism>**  
**<(a) The demonstrative syllogism>**

**100a27** It is a demonstration when the syllogism is from things  
 which are true and primary, [or for which the starting-point for  
 discernment concerning them has been reached through things  
 true and primary.] (100a27-9)

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After defining the syllogism Aristotle next takes<sup>187</sup> the species of the syllogism which reveal themselves in their difference in subject-matter, and for each of them shows and defines what it is and what its being consists in; for by thus taking the differences of the syllogisms in species, he will show how the dialectical syllogism differs from the others. These species of the syllogism resulting from the difference in subject-matter are (1) demonstration, (2) dialectical syllogism, and (3) sophism. For the person who syllogizes furnishes proofs either (1) from true or (2) from approved (premisses) or (3) from what look like approved (premisses), since no one syllogizes from things that are at once false and not approved.<sup>188</sup>

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First he speaks about demonstration, since that is the most authoritative syllogism. A demonstration is a syllogism which yields knowledge. Aristotle says that demonstration is syllogistic inference ‘from things which are true and primary, or for which the point of departure for knowledge about them has been reached through things true and primary’, i.e. if the point at issue is proved syllogistically through (premisses) for which the points of departure and what gives the cause of our discernment of them are things<sup>189</sup> that are true and primary. For not every syllogism from true (premisses) is a demon-  
 stration in the strict sense, but it is if the things through which such a syllogism is proved, in addition to being true are also primary. For they will thus be giving the cause as well – and demonstration is the syllogism through what gives the cause – since what is primary gives the cause for what comes after it. But the things assumed must not

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5 only be primary by nature with respect to what is proved through them, but also primary by being immediate and not requiring proof. For if they are so, then they will be things known from themselves by nature, and the things known from themselves are starting-points of demonstration; and it is what is immediate that is known from itself, since it is indemonstrable.<sup>190</sup> This is why someone who proves that the moon is eclipsed because it is screened by the earth offers a  
 10 demonstrative proof, e.g.

The moon is screened or obscured by the earth

What is screened or obscured suffers an eclipse

for what gives the cause of the eclipse is the screening. But if someone proves that the moon is screened by the earth because it is eclipsed, he does not offer a demonstration in the strict sense even though what he obtains is true, since he is not proving in the strict sense what is posterior and is caused through what is primary and gives the cause,

15 but what is prior through what is posterior: for the eclipse is posterior to the screening and results from it. In this way someone who proves 'She has borne a child' by her lactating, is proving by what is posterior, since the milk is not the cause that she has borne a child, but her having borne a child is the cause that she is lactating. In any case someone who proves that she is lactating by her having borne a child offers a proof by what is a cause and primary. Similarly someone who

20 proves that a man has lungs by his being capable of breathing is syllogizing through what is true but not through what is primary, and therefore is not offering a demonstration. On the other hand if he proves that the man is capable of breathing by his having lungs, then he offers a demonstration. Again, someone who proves that a living creature is endowed with sensation by its being sensitive is not practising demonstration; however, if he proves that it is sensitive by  
 25 its being endowed with sensation, then he has offered a demonstration.

Now if demonstration is through things that are primary, one may further inquire what will be a syllogism which proceeds through what is true but posterior. Either this is a dialectical syllogism, since what is true in this way is assumed as being approved – for it is something approved that the woman who is lactating has born a child, and that the body that is eclipsed is being obscured – or, whereas the former is a demonstration in the strict sense, the latter is also one in a secondary sense, as relating to us, since the things which are assumed are better known to us.

30 Demonstration in the primary and strict sense, then, is the syllogism through things that are primary, as has been stated. An example  
 17,1 of a syllogism through things that are primary and immediate<sup>191</sup> might be the following:

Of each of the things that are, the form is that according to<sup>192</sup> which it is  
 – this proposition is provided with a foundation by induction, but it is indemonstrable and primary, it being posited that all that is in act consists of matter and form, since if that is posited, then to be what it is according to form follows<sup>193</sup> everything that consists of matter and form. If in addition to this we co-assume the proposition that

The living being consists of these<sup>194</sup>

– this too being one that is evident and indemonstrable – then it may be deduced that

The form of the living being is that according to which it is a living being.

And if in addition to this conclusion we again co-assume the evident proposition which says

The living being is sensitive by virtue of its soul,  
 then it would seem to be a living being by its soul: for if it is a living being by that which makes it sensitive, and it is sensitive by its soul, then it seems to be a living being by its soul. Given these suppositions it can be deduced, no longer through primary things but through things proved through these, that the soul is the form of the living being. Again, if we co-assume

Since the form of the living being is invested in matter, the life-giving form is invested in matter<sup>195</sup>

as being evident, and add to this that the form invested in matter is inseparable, it becomes possible to deduce that the soul, which was the form of the living being, is inseparable from the body. For even though this has not been proved through primary and immediate (premisses), this too is demonstrated: for someone who proves that the moon has been deprived of light owing to its being eclipsed does not, it is true, prove this through an immediate or indemonstrable premiss – for that the moon is eclipsed is not indemonstrable but is proved, as we have said before, by its being screened by the earth or by its being obscured – yet the fact that this has been proved through what is immediate and primary renders the syllogism made through this a demonstration too: in a way it too comes to be proved through what is immediate, by the fact of the things through which it is proved having first been proved through what is immediate. And the argument about the soul that we have presented makes both the syllogisms through indemonstrable (premisses) and those through things proved through indemonstrable (premisses) distinctly clear, for this second group is of the type just described. In this way in geometry the first theorem in Euclid's *Elements* is proved through indemonstrable (premisses) – for it is proved through principles – but the theorem that the three angles of a triangle are equal to two right angles is not proved through indemonstrable (premisses) – for this is proved

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18,1 through the premiss that with lines cutting parallel lines the alternate angles are equal and the premiss that with lines cutting parallel lines the external angle is equal to the internal angle opposite to it, and these are not principles but assumptions obtained through demonstration. However, Aristotle also, more in accordance with common  
 5 usage, calls every syllogism from true (premises) a demonstration. He speaks of demonstration and the demonstrative syllogism primarily and at greater length in the *Posterior Analytics*; here he has discussed it insofar as this serves his purpose of setting the dialectical syllogism apart from others. By syllogism is meant the premisses along with the conclusion.

### **<1.1 (7) (b) The dialectical syllogism>**

[100a29 The dialectical syllogism is that which syllogizes from things approved. Now true and primary are (100b1) things which have their credibility not through others but from themselves. For in the starting-points for knowledge there is no need to look for the reason why: on the contrary each of the principles has to be credible itself by itself. Approved, on the other hand, are those things which are held to be so by all or most or the knowledgeable, and of these latter either all or most or the best-known and most approved.] (100a29-b23)

10 After speaking about demonstration he next speaks about the dialectical syllogism. He says that it is the syllogism which proceeds through approved (premises). After saying this, he next explains which are those true and primary (premises) through which he has said the demonstrative syllogism proceeds, and which are the approved ones through which he has said the dialectical syllogism proceeds, and points out the difference between them. True and  
 15 primary, he says, are things ‘which have their credibility not through others but from themselves’. The things which are immediate are of this sort. For he affirms that the principles which yield knowledge should of themselves have credibility, and one should not be looking for the cause of their being so: for if they had other principles and causes, they would no longer be principles in their own right. Definitions are of this kind, for the things assumed in definitional accounts  
 20 are not obtained through demonstration; and what are called the ‘natural’ and ‘common’ notions, to which the axioms belong, are also of this kind. And that what is hot heats, and what is cold cools, are principles too, and also that everything that comes into being comes out of something.<sup>196</sup>

Aristotle says ‘for in the starting-points for knowledge there is no need to look for the reason why’, not as laying down the law: he is

pointing out that where there is a search for the reason why, there has been no demonstration, since demonstration has to be through things that are known.

Next he says what are the ‘approved’ things<sup>197</sup> through which the dialectical syllogism comes to be. ‘Approved’, he says, are ‘those things which are held to be so<sup>198</sup> by all or most or the knowledgeable,<sup>199</sup> and of these latter either all or most or the best-known or most approved’.<sup>200</sup> Approved in the strictest and primary sense would seem to be the things that are held to be so by all or by the majority. By all e.g. that what is choiceworthy is good,<sup>201</sup> and that health, wealth and life are choiceworthy; for those who say otherwise do so not because they are so disposed, but in order to defend a thesis, and bear witness to these things being choiceworthy by their actual choice of them. Other things of this kind are that what is good is beneficial, and that one ought to honour his parents. And by the majority, that insight is preferable to wealth, or that soul is more valuable than body, and<sup>202</sup> that there exist gods.

If the dialectician had to speak only about things posited in common opinions,<sup>203</sup> then only what is held to be so by all or by the majority would have been useful for his syllogizing, and what is approved in that sense.<sup>204</sup> But since the dialectician’s arguments are in fact also about things on which the majority do not have any opinion, but rather give credence to those of others – the well-informed who are concerned with these things – therefore the dialectician will syllogize on all subjects, and again, as we have said, what is found in these things<sup>205</sup> is approved too. And what is approved among these is, first, what is held to be so by all the well-informed, as for instance that the goods of the soul are greater than those of the body, that nothing comes into being out of what is not,<sup>206</sup> and that the virtues are goods; or by the majority of them, such as that virtue is choiceworthy for its own sake – even if Epicurus disagrees – and that happiness comes into being by virtue, and similarly that there is no body that has no parts,<sup>207</sup> and no infinite number of worlds either; or at least by the most approved, such as the soul’s being immortal, on Plato’s authority, or that there exists a fifth element,<sup>208</sup> on Aristotle’s. For if those who are approved for their expert knowledgeability are so due to their being praised and admired by the many, then what they claim is also in a way posited by the many. For the many accept these men on the strength of such judgements: the things for which they are approved are themselves approved, and it is owing to such judgements that the well-informed are approved.<sup>209</sup> Aristotle will also, in his account of dialectical propositions, offer<sup>210</sup> us ‘topics’ through which we shall be able to be supplied with<sup>211</sup> the approved (premisses).<sup>212</sup>

The difference between approved and true is not that what is

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approved is false – for some things that are approved are also true<sup>213</sup> – but is in the judging. With what is true, judging is on the basis of the fact which this truth has reference to, for when this accords with it, then it is true. But with what is approved, the judging is not based on facts but on the audience and on their suppositions about the facts.<sup>214</sup>

### <1.1 (8) (c) The contentious syllogism>

**100b23** A contentious syllogism is that from things which look like but are not approved, and that which looks like one from things approved or which look like approved [for not all that looks like something approved is in fact approved. For none of the things which are called ‘approved’ show their character entirely on the surface, as is the case with the starting-points of contentious arguments: for the falsity in these is immediately obvious and usually even to persons of limited comprehension.] (100b23-101a1)

Aristotle has spoken about the contentious syllogism in the *Sophistical Refutations*, where indeed his discussion is primarily of this type of syllogism. His definitions of the contentious syllogism in that work and in the present are similar. He says there are two forms of this type of syllogism, one of which owes its contentious character to a mistake in subject-matter, not form: this is ‘the syllogism from things which look like, but are not approved’. Aristotle himself declares which are these things which look like they are but are not approved: ‘for not all’, he says, ‘that looks like something approved is in fact approved’, and he goes on to say why this is so: ‘for none of the things which are called approved show their character entirely on the surface’. What is on the surface is what is refuted<sup>215</sup> with just a brief spell of attention paid to it. This is a<sup>216</sup> species among the premisses of contentious syllogisms. The following is an example of what looks like something approved: that he that sees has eyes, through which it is deduced that

The one-eyed person has eyes.<sup>217</sup>

Another one is

What you say comes out through your mouth  
where someone, having obtained this, deduces from it that when you say ‘car’ a car comes out through your mouth. Also

That which you have not lost, you have

15 – here someone, having obtained this, deduces that

You have horns, since you have not lost any horns.

Similarly that the person who has eyesight is seeing, and the person who is asleep has eyesight.<sup>218</sup> Statements like these have a superficial

plausibility and, as Aristotle himself says, the falsity in these becomes ‘immediately obvious (...) even to persons of limited comprehension’. This is not the case with things which are genuinely approved: in these the falsity is not easy to detect. At any rate, that the gods are able to do everything, which is approved but not true,<sup>219</sup> is not easy to refute. And the same goes for

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The greater evil is contrary to the greater good since in a few instances one may find this is not so. It is held not to be so<sup>220</sup> with unfitness and health: here what is contrary to the greater good, i.e. unfitness, is held to be a lesser evil than sickness – which is contrary to the lesser good, health – because all those who are sick are unfit, but not all who are unfit are sick. The explanation of this is that fitness includes health, since fitness is a form of health. Therefore, containing health within itself, it is a greater good than health; for it has the additional feature of being itself among the things that are choiceworthy for their own sake. On the other hand, unfitness does not contain sickness within itself, but resides solely in that feature in which fitness was superior to health, whereas sickness does contain unfitness within itself, since sickness is an addition to unfitness, just as fitness is an addition to health.

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[101a1 So let the first of those mentioned be said to be a contentious syllogism and a syllogism, and the other one a contentious syllogism but not a syllogism, since it appears to syllogize but does not do so.] (101a1-4)

Aristotle says that the contentious syllogisms which are so by their subject-matter are syllogisms too. For when someone produces a syllogism by a syllogistic pair from premisses of this type,<sup>221</sup> the result is a contentious syllogism, such as those mentioned before and the following:

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All that are masculine have masculinity

Cloak is masculine

Therefore, cloak has masculinity

for this syllogism is only contentious because it has been obtained<sup>222</sup> as something approved that all that are masculine have masculinity, since it is by a syllogistic pair in the first figure, out of two affirmative premisses, one particular and one – the major premiss – universal.<sup>223</sup>

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But there is another contentious syllogism which is faulty in form.<sup>224</sup> This is not a syllogism without qualification: the name ‘contentious syllogism’ belongs to it as a whole.<sup>225</sup> The claims which are put in question form in a non-syllogistic pair are of this sort, for instance if one deduces either that

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Every human is a horse  
through obtaining that

Every human is a living being  
and

Every horse is a living being

for such a conjunction is non-syllogistic in spite of the fact that it consists of true premisses, since it comprises two affirmative statements in the second figure.<sup>226</sup> Similarly if one obtains that, among bodies, corpses are moved and altered, and also that things which have sensation are moved, and if one thinks to prove from this that dead bodies have sensation, as Democritus did. This type of fallacy can also be produced from true (premisses), as with those mentioned before. The following instances are similar:

Man is a living being

Living being is a genus

Therefore: man is a genus.

25 For the premisses are approved and true, yet the conjunction is non-syllogistic, because we have a syllogism in the first figure in which the major premiss is not universal.<sup>227</sup> The person who thinks to prove that self-control is sanity because both of these render people superior to sensual pleasures is in the same position: the premisses are true, approved and productive of a species,<sup>228</sup> but again we have two affirmative assumptions in the second figure. This is also why 30 the fact that being bold holds of both the brave person and the well-informed person still does not make the brave person a well-informed one.

22,1 With regard to things approved we need to have first taken the point that they are not either true or false insofar as they are approved.<sup>229</sup> There are both true things approved, such as that there are gods, and false things approved, such as that the gods are able to do everything<sup>230</sup> – for they are incapable of evildoings, which are included in ‘everything’. Just so there are, by contrast, things which are non-approved but true, such as that it is not the case that every

5 body is in a place, on account of the unerring.<sup>231</sup> For the adjudication of what is approved is based, as we have said before,<sup>232</sup> on what is held to be so.<sup>233</sup>

[101a5] Besides all the syllogisms mentioned before, there are also the fallacious inferences which are made from <principles> peculiar to certain sciences, as is the case with geometry and with those akin to it. For this type seems to be different from the syllogisms mentioned before: for the person who offers a false construction syllogizes neither from things true and primary nor from things approved – for they do not fall within the definition: for he obtains neither the things held to be so by all, nor by most, nor by the knowledgeable, nor of these latter by all

or by most or by the most approved,] but [he produces his syllogism] from those assumptions which are peculiar to that science<sup>234</sup> [yet not true. For he makes his fallacious inference either by drawing semicircles incorrectly, or by drawing lines not as they should be drawn.] (101a5-17)

After discussing the contentious syllogism<sup>235</sup> in these words and showing those differences among syllogisms which arise from their subject-matter – for no one, as I have said before,<sup>236</sup> syllogizes from what is both false and not approved, this being a difference<sup>237</sup> of propositions besides the differences of subject-matter mentioned before;<sup>238</sup> the trial syllogism, which he adds to these elsewhere,<sup>239</sup> is also from (premisses) that are approved in a sense: the difference with the dialectical syllogism is that the latter proceeds from (premisses) which are approved without qualification, whereas the trial syllogism refutes and syllogizes from that which is held to be so by the respondent,<sup>240</sup> and for the sake of trying,<sup>241</sup> so it is from (premisses) that are approved in his eyes<sup>242</sup> – after discussing these, then, Aristotle says that besides all the syllogisms mentioned before – the demonstrative syllogizing from true and primary (premisses), the dialectical from approved (premisses), and the contentious from what look like approved (premisses) – there is another species of syllogisms: the fallacious inference which in any science is produced from principles peculiar to that science. We can consider the false constructions<sup>243</sup> in geometry as examples of these; and sciences which he might mention as being akin to geometry are arithmetic – for this too deals with quantity, but discrete<sup>244</sup> quantity – and further astronomy, optics and mechanics, for these make additional<sup>245</sup> use of the principles of geometry. Aristotle proves that this species of syllogisms is different from those mentioned before by the fact that none of the definitions which have been given fits it. The person who offers a false construction does so neither ‘from things true and primary’, since it is impossible that a falsehood should be deduced<sup>246</sup> from truths, nor ‘from things approved’, for the things on which false constructions are based do not fall under the definition of what is approved. For the person who offers false constructions does not obtain either what is held to be the case by all, or by the majority – neither all nor the majority understand the subject to begin with<sup>247</sup> – nor what is held to be so by all the well-informed, or by most of them, or even by the best-known. For even if one of the well-informed holds such an opinion,<sup>248</sup> still the person who offers the false construction does not posit it by having someone’s opinion conceded, but practises his deception in the course of his argument about these matters. Nor does the definition of the contentious syllogism seem to fit this kind of fallacy, for he neither draws the figure because it appears to be and

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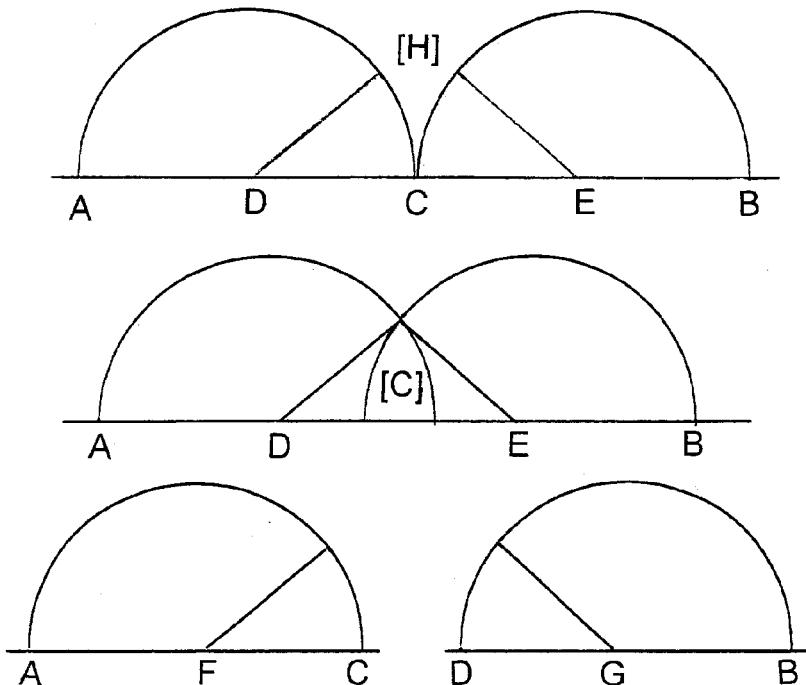
23,1 is held in esteem to draw it like this, nor is his construction false because the inference is non-syllogistic. Aristotle has made it clear that the argument of the person who offers a false construction is not like this by saying ‘but he produces his syllogism from the assumptions which are peculiar to that science, yet not true’. For the contentious syllogism does not proceed through (premises) of this kind. So this is a different species of fallacies, not used either by the dialectician or by the sophist, but by practitioners of the sciences, for the sake of trying<sup>249</sup> those occupied with these, and training them towards a better perception of the truths in these sciences. As indicating that fallacious inferences in geometry are produced from principles peculiar to it, Aristotle presents the words ‘for the person who offers false constructions produces his fallacious inference by drawing semicircles incorrectly, or by drawing lines not as they should be drawn’. Fallacies which are produced in this way are produced by people who are applying the principles of geometry: for the person who proves 10 through these does not obtain assumptions as held to be the case by others, but as following from the principles of geometry, and he does not practise his deception by what is stated in words but by an incorrect diagram. For drawing a circle with any centre and radius, and drawing a straight line joining any point with any other point – the devices applied by the person who draws semicircles ‘incorrectly’ and draws lines ‘not as they should be drawn’ – these are among the principles of geometry.

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20      **101a13** but [he produces his syllogism] from those assumptions which are peculiar to that science [, yet not true.] (101a13-14)

It should be noted that premisses, in Aristotle’s speech, are assumptions. He may have used the phrase ‘for by either drawing semicircles incorrectly, or drawing lines not as they should be drawn’ simply<sup>250</sup> because false constructions in general involve this kind of thing, or he may have given this as an example of a false construction. For 25 there is a false construction in geometry which results from drawing semicircles ‘incorrectly’ and drawing lines ‘not as they should be drawn’, one which shows that two sides of a triangle are equal to the third, and one which shows that they are actually less than the third; yet it is a demonstrated thesis in geometry that in any triangle two sides are greater than the third in any permutation. The person who offers the false construction showing that the two are equal to the 30 third shows this through drawing semicircles incorrectly, and joining lines<sup>251</sup> inappropriately, as follows.

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Taking a line AB, he cuts it in two at C and draws semicircles around<sup>252</sup> each of the halves AC and CB. These semicircles touch each other at H, so that at this point AHC and CHB intersect with each other. Then taking the centres of the semicircles – D of AHC and E of CHB – he draws lines joining H, at which the semicircles touch each other, with the centres D and E. This yields a triangle DHE. Now the lines DH and DC in the semicircle AHC, since both of them have their point of departure in the centre, are equal; and so, for the same reason, are EH and EC in the semicircle CHB, for these too have their point of departure in the centre. Therefore DH and HE, the two sides of the triangle, are equal<sup>253</sup> to DE, the basis of the triangle.

Through this he proves that two sides of a triangle are equal to the third. In doing so he has neither drawn the semicircles ‘correctly’ – for they can never touch each other at H, but only at C, which provided the point of departure for drawing them – nor drawn the lines ‘as they should be drawn’ – for no lines can be drawn from the point at which the semi-circles touch, to their centres, so as to form a triangle: the lines drawn from the point of contact are the same as those<sup>254</sup> on which the centres lie, their point of contact being at C.

Again, those who offer a false construction showing that the one line is greater than the other two do so by drawing semicircles and

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20 joining points with lines as follows. Taking a line AB, they take two points C and D on it, near to each other, and draw semicircles around<sup>255</sup> both of the lines AC and DB, these semicircles intersecting or touching each other at point E. From this point E at which the two semicircles touch each other they draw lines joining it to  
 25 the centres, F and G, of the two semicircles. This yields a triangle EFG. Now the lines FE and FC, since both of them have their point of departure in the centre of the same semicircle, are equal; and  
 25,1 the lines GE and GD too are equal, for these too have their point of departure in the centre, G, of a semicircle, BED. Then the sum of the two sides of the triangle, EF and EG, is equal to the sum of FC and DG, which is less than the basis of the triangle, FG. It follows that the sum of the two sides of the triangle, FE and EG,  
 5 is less than the third side, FG.

Here again, the false construction arises from the drawing of the semicircles – for semicircles circumscribed in this way cannot intersect or indeed touch each other at all – and from joining points by lines – for the lines EF and EG have been drawn, incorrectly, as though from the intersection of the semicircles, and these lines produced the triangle.<sup>256</sup> So just as the dialectical syllogism has for  
 10 its counterpart the sophistic syllogism based on what look like things approved, in the same way it seems the demonstrative syllogism, based on principles appropriate to the point at issue, has as a counterpart this fallacious inference leading our arguments through false statements to another false statement.

**101a18** Let the species of syllogisms, then, as in outline be those mentioned, ... (101a18-19)

15 As in a sketch, not precisely. Aristotle presumably speaks in this way because he has not given the definition of each in precise form, or not elaborated them since his purpose did not concern these, or because he elsewhere adds the trial syllogism as a fourth to the three mentioned first.<sup>257</sup> Or the trial syllogism is the same as the fallacious inference that proceeds ‘from the things peculiar with regard to certain sciences’ which was mentioned before. For he gives a definition of the trial syllogism too, in the *Sophistical Refutations*: ‘trial syllogisms are those from that which is held to be so by the respondent<sup>258</sup> and which the person who claims to possess the scientific knowledge must know’, and this seems equivalent to ‘the fallacious inferences which proceed from the things peculiar with regard to  
 20 certain sciences’ and to ‘but from the assumptions peculiar to that science’, since the person who claims to possess the science should know both the principles and the assumptions which are peculiar to that science, and answer in accordance with these. And so it would  
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be called trial syllogism from the purpose of the questioner, but false construction and fallacious inference from what has actually come about.

But the enthymeme too, even if it is not a syllogism without qualification, is still a rhetorical syllogism. So his not mentioning this either makes it plausible for him to say ‘in outline’. Or he says ‘as in outline’ because there are also species of syllogisms constituted by the different figures.

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**101a19** ... and speaking generally, about all the things which have been and hereafter will be said [, let this be as far as we go in specifying them, because we do not choose to give of any of them the accurate account, but only as much as we wish to discuss of them in outline, since we consider it to be quite adequate for the method before us to be able to recognize each of these items in one way or another.] (101a19-24)

After saying of the syllogisms ‘let their species in outline, then, be those mentioned’, Aristotle adds that it must be specified and remembered ‘about all the things which have been and will be said’ in general, that<sup>259</sup> ‘we do not choose to give of any of them the account that is accurate’ and scientific and demonstrative, but a more general one in the form of an outline,<sup>260</sup> because ‘for the method before us’, which is dialectic, it is quite sufficient to ‘be able in one way or another to recognize each item’ that is mentioned. For things that are approved and that are proved through what is approved are divorced from scientific precision of speech, and the things before us are of this kind. As to how syllogisms are formed, in how many figures and how many in each figure, and which are demonstrative and which are not, which perfect and which imperfect, and which conjunctions<sup>261</sup> are syllogistic and which non-syllogistic – something that he has referred to when defining the contentious syllogism<sup>262</sup> – and generally of all that is useful for the study of syllogistic Aristotle has given his accurate account in the *Prior Analytics*, and of demonstration and definitions in the *Posterior Analytics*; and he speaks of definitions in the *Metaphysics* as well,<sup>263</sup> and about genera too.<sup>264</sup> All these subjects he also mentions in the present work, but more superficially; for if one transferred what is said in those other works to the present, he would go beyond the confines of dialectic as an art which, as he said, syllogizes from things which are approved.

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**<1.2 Uses of the study>**

**101a25** The next thing after what has been said would seem to be to say for how many things, and which ones, the study is useful. (101a25-6)

After saying what the dialectical syllogism is, and in what it differs from other syllogisms: in syllogizing through things which are approved, Aristotle duly shows next ‘for how many things, and which ones’ dialectic is ‘useful’. This instruction is necessary before offering the method itself, since people become keener on what is being said if they know what is the use of it. At the same time, since dialectic has been set down as an art of syllogizing through what is approved, whereas philosophy is held to deal with what is true and with proof through this – a different subject from what is approved – he shows that dialectic is also useful for philosophy and towards finding the truth, and that the study before us does not lie outside philosophy.

**101a26** It is so for three things: for training, for encounters, and for the sciences which make up philosophy. [That it is useful for training is plain from the facts, for if we have a method we shall more easily be able to produce dialectical syllogisms about the <problem> put before us. <It is useful> for encounters, because once we have a list of the opinions of the majority we can deal with them on the basis not of others’ doctrines but of their own, and so make them change direction in any wrong claims they appear to us to make. And for the sciences which make up philosophy, because if we are able to argue through the puzzles on either side of a question we shall more easily in each case discern what is true and what is false.] (101a26-36)

Aristotle says that the study of dialectic is useful for three things. First, ‘for training’. By training he either means that which occurs in argument addressed to others in question and answer form – as a form of training they try, receiving certain problems from their interlocutors, to assist<sup>265</sup> these by producing argumentative attacks<sup>266</sup> through what is approved – or he means by it argumentative attack on either side of a question. This kind of speech was customary among the older philosophers,<sup>267</sup> who set up most of their classes in this way – not on the basis of books as it is now done, since at the time there were not yet any books of this kind.<sup>268</sup> After a thesis had been posited, they trained their aptitude at finding argumentative attacks by producing attack arguments about this thesis, establishing and refuting the position through what is approved. There are books of this kind written by Aristotle and Theophrastus, containing argumenta-

tive attacks on both sides of a question through what is approved. This is the kind of training for which Aristotle says dialectic is useful, since if we have a method for finding attack arguments – and this is the discerning of the topics – we shall attack by argument more easily. For just as in rhetorical exercises those who are able to divide the problems and have a comprehensive view of the order of the main headings attack by argument more easily, so in dialectical exercises those who know the method are more easily supplied with attack arguments relating to the issues. And such a training in argumentations<sup>269</sup> is useful for finding what is investigated and what is true, as Aristotle will say when he sets out its usefulness for philosophy as a preliminary mental preparation. For just as exercises of the body, performed according to the rules of the art, produce fitness for the body,<sup>270</sup> so exercises of the mind in argumentations, performed according to method, produce the fitness which is peculiar to the mind; and the peculiar fitness of the rational<sup>271</sup> soul is the capacity by which it becomes apt at finding and judging<sup>272</sup> what is true.

The second way in which he additionally sets out that the study of dialectic is beneficial, is in its use ‘for encounters’. By encounters he means meetings with the many, who must be encountered in a spirit of community and human kindness, and in a manner which is beneficial. Now it is not possible to communicate with these through things true and demonstrative:<sup>273</sup> they are not even able to understand any of these things to begin with, and do not submit to being instructed about them either, so they could never profit from these things that they cannot understand to begin with. But if we conduct our meetings with them through those things which are approved and are held to be so by these people themselves, they will follow what is said and will easily be redirected through such utterances if they have posited something incorrectly.

For if, to the person who believes that pleasure is good and who is a slave to it,<sup>274</sup> one would prove that pleasure is not good by saying that pleasure is a perceptible process to a natural state,<sup>275</sup> and that such a natural state<sup>276</sup> cannot be good because process is incomplete, whereas nothing which is good is incomplete – if one would prove to such a person through this argument that pleasure is not good, one would fail, because this person did not know what was being said to begin with. But if one starts<sup>277</sup> from that which is common and approved, and so examines whether the interlocutor does not think that the good makes people good, just as white makes them white and hot makes them hot, and if upon this being answered affirmatively one then goes on to ask whether he thinks pleasure makes people good, then he will obtain that it does not – for so much is evident – and he will deduce that pleasure is not good from the interlocutor’s

own opinions and answers. This is why one can also make him change his ways: for everyone somehow yields to what he himself has posited.

The third way that Aristotle sets out in which the study of dialectic is beneficial, is in its use for philosophy and scientific discernment, that is towards the finding and discerning of the truth. By ‘sciences which make up philosophy’ he means physical science, ethics, logic and metaphysics. For those who can discern what is persuasive as contributing to opposite conclusions, and can attack by argument on either side of a question, will find out more easily on which side of the contradiction the truth lies, as if they had listened to both parties in a lawsuit.<sup>278</sup> For just as the judge comes to know what is right through listening to both parties, so in philosophical inquiries at many points it is not possible to find the truth easily without first having attacked by argument on both sides. What Plato says in the *Parmenides* accords with this: ‘Accustom and train yourself more, while you are young, in that art which is held to be useless and is called by the many 5 “idle talking” – otherwise the truth will escape you.’<sup>278a</sup> Further, the person who knows the nature of what is persuasive will not be led astray by it as if it were true, but will first distinguish what looks as if it were true from what is not true<sup>279</sup> by comparing them to each other: for no one will be led astray by those who try to make the truth disappear if he is versed in the means by which they do so. In addition, 10 the person who is apt at finding what looks just like the truth – i.e. what is persuasive – is the better prepared for finding out what is actually true. And further, if the person who speaks soundly and correctly about a subject is the one who argues in such a way that his arguments suffice also to solve the puzzles surrounding it, then it is clearly useful to be well-trained in the puzzles that may be raised 15 with respect to it, for thus one could at once have a comprehensive view of the solutions to these puzzles.

**101a36** And further (the study of dialectic is useful) with a view to the first things in each science. [For it is not possible to say anything about the principles peculiar to any given science on the basis of these same principles, seeing that the principles are the first of all; (101b) it is necessary to discuss these through the things approved about each of these things. And this is a distinctive property of dialectic or most peculiar to it; ...] (101a36-b3)

After saying that dialectic is useful for three things and setting out which these are, Aristotle adds to them a fourth, either as a subdivision 20 of the third use, which was that ‘for the sciences which make up philosophy’ – for if the fourth use is ‘with a view to the first things in each science’ it will relate to the first things in philosophy as well –

or as another one besides those mentioned before. What he adds is to say that dialectic is useful also with a view to the principles in each science: for no science can argue about its proper principles, because if one<sup>280</sup> would speak<sup>281</sup> scientifically about these and prove them, he has to prove them from first things – this is the nature of scientific and demonstrative proof – but one does not have any such first thing prior to the principles. So these principles of sciences which need to be provided with some foundation must, because they cannot be proved through what is true and primary, be proved and justified through what is approved – and syllogizing through this is a distinctive property of dialectic. Another distinctive property of it, as Aristotle will go on to say, is to provide a foundation for the point at issue through induction; and principles come to be justified most of all through induction. So the scientist will speak of the principles proper to his science as a dialectician, or the dialectician will do this on his behalf. And if dialectic is useful with a view to the first things, the principles of each science, it will be so, as Aristotle says, for philosophy and its principles as well, providing its usefulness there too.

And so this fourth use of dialectic can be subsumed under its usefulness for philosophy, as an explicit addition that dialectic is in this respect useful for other sciences in the same way that it is for philosophy. Aristotle himself often when proving things in philosophy, adds ‘logically’ in the sense of ‘dialectically’, implying that there are also things in philosophy which require this kind of proofs. An example of this is that

Every body is delimited<sup>282</sup> by a surface.

This is something approved, given the supposition that a surface is the limit of a body, which Aristotle has used in his *Physics*<sup>283</sup> to show that there is no unlimited body. By adding to this that

Nothing which is delimited is unlimited  
he has deduced that

Therefore: no body is unlimited.

That it is the task of the dialectician to speak about principles can be made plain from the following. The geometrician posits as principles of geometry that surface is that which has length and width only, and also posits that a line is a length without width, and that a point is that which has no part. Some people object to this, saying that it is not possible for a magnitude to have only two dimensions, still less to have only one, and that there is no such thing as a point at all, since there is nothing that will neither diminish what it is taken from nor increase what it is added to, as Zeno of Elea said, and that one cannot even form an image<sup>284</sup> of what is without dimension. Now it is not possible to offer a geometrical proof that any of these are real, but the dialectician will have no difficulty in providing a foundation for them through things approved. For having obtained that

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Surface is the limit of the body  
which is approved, and that

A limit is other than that which it is a limit of  
and having provided a foundation for this by induction,<sup>285</sup> he deduces  
that

Surface is other than body

31,1 i.e. than what has three dimensions; and if it is other than that, it  
cannot have three dimensions, since if it did it would be the same as  
body, for having three dimensions is what body has its being in.  
However, surface is seen to have length and width; therefore it cannot  
have depth; therefore it has just the two dimensions length and width.

5 By using the same argument, the dialectician will also prove that a  
line is length without width. For being a limit of a surface, it is not  
itself a surface; but it is seen to have length: therefore it will be length  
without width. And since the line, having length, has just one limit,  
and this is other than it, the point cannot even have that dimension.  
But what does not have length is without dimension, since every  
dimension is attended by length.<sup>286</sup>

10 Another way to argue about the point by what is approved is as  
follows. If the point had extension, it would have this either in one  
dimension, or two, or three. But if in three, then it will be a body; if  
in two, a surface; and if in one, a line. But it is none of these; therefore  
the point is without dimensions. Another way is: every limit of a  
magnitude has one dimension less than this magnitude has, as a  
15 surface has one dimension less than a body – of which it is the limit  
– and a line has one less than a surface. But the point too is a limit,  
of the line: therefore it too is one dimension less, than the line. But  
the line had just one dimension: so if its limit is deprived of that, it  
will be without dimensions. And another way: a beginning<sup>287</sup> is not  
yet that of which it is the beginning; but the point is the beginning of  
20 the first dimension, which is length: therefore the point is without  
dimension.

That there really is such a thing as a point can be proved dialectically as follows. Everything which is limited has a limit; the limit is other than that of which it is a limit – for a limit and that of which it is a limit are not the same. The line, which is limited,<sup>288</sup> also has a limit, which is other than the line. But if it is not a line, it is a point,  
25 since the limit of the line cannot be said to be plane or body, and these  
are the only four items in the realm of dimension.

In the same way the dialectician can prove that the single unit has no parts: in the realm of number, that is smallest by which every number is measured; every number is measured by the unit; therefore the unit is the smallest in the realm of number; therefore it has no parts. And also as follows: what is in the realm of number, but is not  
30 number, that is indivisible; and the unit is of this sort.<sup>289</sup>

That ‘this’, i.e. syllogizing from what is approved, ‘is a distinctive property of dialectic or most peculiar to it’, Aristotle has said either in view of rhetoric, since that too proceeds through this, or because the philosopher too, as we have said before,<sup>290</sup> sometimes proves things through what is approved.

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**101b3** ...; for, being of an examining nature, it contains a way towards the principles of all (scientific) methods. (101b3-4)

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Aristotle himself gives us to understand that by ‘methods’ he means both sciences and arts. For after saying ‘and further with a view to the first things in each science’ he now instead of ‘sciences’ says ‘methods’. And ‘examining’ stands for ‘investigative and such as to produce attack arguments against.’

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### <1.3 Goal of the study>

**101b5** Our command of the method will be complete<sup>291</sup> when we are in a similar position [as with rhetoric, medicine and capacities of that kind (, i.e. doing what we choose to within the options open to us).<sup>292</sup> For the orator will not by all means succeed in persuading, nor the physician in curing, yet if he does not neglect any of the options open to him, we shall say that he has an adequate command of his branch of knowledge.] (101b5-10)

After saying what the approved syllogism is, and that dialectic deals with this kind of syllogism, and after showing for how many things it is useful and which these are, he now says what is the task of dialectic, and when, in what condition,<sup>293</sup> we have a ‘complete command of the method’.

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He calls medicine and the pilot’s art and dialectic ‘capacities’, either because they can be used both for good and for evil,<sup>294</sup> or more likely because since they are stochastic<sup>295</sup> they do not proceed by definite steps, but also require an understanding appropriate to them with a view to accommodating the circumstances and ordering what is said and done in such a way that this order makes it practically effective; or rather he calls the arts more generally ‘capacities’ as though calling them ‘dispositions’, and then dialectic will be one of the arts ‘of that kind’, i.e. the stochastic.

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He says that our command of it will be complete when we have not omitted any of the things that can be produced in attack by approved arguments on the issue. For it is not required of the dialectician that the interlocutor should always be led into a contradiction, just as it is not required of the orator always to persuade: his task is to omit nothing that is persuasive with a view to making the issue credible.<sup>296</sup>

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33,1 The same applies to medicine, the pilot's art and all other stochastic arts: the physician's job is to do all that can be done towards saving the patient, not to save him. If one said this was his job, then non-physicians will be physicians and the physician will not be one, since lay persons often save sick people by administering things to them with a happy hand, whereas physicians often fail to save them,  
5 when their ailment is too bad for medical aid or is not easily subjected to diagnosis; and just so with the pilot's art. The same account applies to rhetoric and dialectic, since often the want of an attack argument, whether for syllogizing the point at issue or for convincing the audience, is due to the nature of the problem, not to the dialectician  
10 or the orator. For with arts of this kind our estimate is not based on the goals achieved by them, as it is with house-building, weaving and other productive arts. In all these the activity proceeds according to definite, ordered ways, and their product could never come about by chance; here the goal is the product before us, by the fact that this  
15 product follows upon the things done for the sake of it, so that it becomes a sign that the things which precede it have been done correctly, according to the rules of the art. By contrast, in the stochastic arts the desired result does not always follow upon the prescriptions of the art being carried out. The explanation is that in these arts some effects come about by chance: their results are not brought about by definite procedures. This is why what is achieved by arts of this  
20 kind is not their goal, as it is in those arts in which a thing is brought about by definite procedures and could not come about without these: for here the product is at once the goal and, as I have said,<sup>297</sup> a sign that everything has been done according to the art, since the product could not have come about in any other way.

Now the product in all arts is the activity which, in accordance with  
25 the disposition and art, affects the appropriate objects through the appropriate instruments; the goal, in those arts which require matter of a certain description and not just any,<sup>298</sup> is not the product alone but that which, with the product, comprises these features too. For the physician's job is to do everything that can be done in accordance with the art towards saving the patient, but his goal, for which he does the other things, is to save him, and that requires other factors  
34,1 besides what is done in accordance with the art of medicine. For with fully determined procedures, achieving the goal is within the power of the agent, just as it is to act in accordance with the art, but in the stochastic arts the goal is not within the power of the practitioners, any more than being happy is within the power of the virtuous –  
5 except insofar as being good and noble is already a part of it.

### <1.4 Propositions and problems>

**101b11** So first we have to study what the method consists of. [Obviously if we grasp the number and kinds of things arguments concern, and what they are from, and how we can be supplied with these things, then we shall have an adequate grasp of what we set out to accomplish. Now the things that arguments are from and the things that syllogisms are about, are equal in number and the same. Arguments are made of propositions, and what syllogisms are about are problems. Every proposition and every problem brings out either a genus or a distinctive property or an accidental – for the difference, since it is of genus, should also be classed with the genus.] (101b11-19)

Having first said what was to be said about dialectic as a whole – i.e. the purpose of the method, in what way it is different from the other syllogistic methods, its usefulness, and how to judge about its goal – Aristotle duly speaks further about the things to which it owes its being. He proceeds to the account of these investigating what its being resides in, what it consists of, what the future dialectician has to concern himself about, and what we have to know and be able to do if we are to be dialecticians. Knowing what its being resides in will put us in possession of what is practically useful, and offering the topics will provide the actual use of this.

First he says we have to study ‘what the method consists of’. Having proposed this,<sup>299</sup> he continues ‘if we grasp the number and kinds of things arguments concern, and what they are from, and how we can be supplied with these things’,<sup>300</sup> then we shall have an adequate grasp of what we set out to accomplish’, i.e. to study ‘what the method consists of’. For if these things in and of which the method consists are not included in certain species, there cannot occur either learning them or knowing them, since individuals are unlimited in number. The claim is that ‘If we know of what things the method of dialectic consists and in what things its being resides, then we can learn the number and kinds of things that syllogisms produced according to this method concern, and what they are from.’

The phrase ‘the number and kinds of things (arguments) concern’ is used with reference to problems, as Aristotle will say later on, for the dialectician sets the argument in motion and produces his syllogism with reference to some ‘problem’ put forward. So we have to know how many species of dialectical problems there are and which they are.

The ‘what they are from’ refers to propositions. But it cannot simply refer to the fact that they are out of propositions: with respect

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to these too he seems to mean ‘what *number and which* they are from’  
 35,1 – for a dialectical syllogism cannot be made out of each and every proposition. Now if we know both how many dialectical problems and what kinds there are (‘how many’ in kind, obviously, and ‘what kinds’ as equivalent to ‘which’, since just to know that there are four kinds of problems is not yet to know which ones these are), and also know  
 5 the propositions out of which the syllogisms relating to such problems are made (for by ‘arguments’ he seems to refer to syllogisms, or perhaps to inductions as well, since the inductive argument too is dialectical, as he will say later), and if in addition to these things we also know by which means one can be supplied with these – by this he seems to refer either (a) to both problems and propositions, since not every problem is dialectical, but only that which is as he will say  
 10 further on, or (b) he just refers by ‘how we can be supplied with these’ to the propositions through which syllogisms are made; for the main thing in syllogizing is to have a supply of premisses;<sup>301</sup> or (c) he refers by this to dialectical arguments, i.e. syllogisms and inductions – then we seem to have a complete theory of what the dialectical method consists of. That he seems to mean this by ‘and how we can be supplied  
 15 with these (i.e. of the arguments mentioned before, not the problems and propositions) can also be made plain by the fact that, after speaking of the dialectical problems and propositions, and exhibiting what each of these is – that every dialectical problem and similarly every proposition is either about one of the things that have reference  
 20 ‘to choice or avoidance’, or about one of those having reference ‘to truth and knowledge’, or of the things that contribute to one of these – he states ‘and the instruments through which we can be supplied with syllogisms are four in number’. It seems he gives this as an explanation of ‘how we can be supplied with these’, for such a supply comes about through the instruments and topics. It is true that a supply of  
 25 problems and propositions contributes towards this supply of syllogisms, as Aristotle himself too will say further on.

The clause ‘So first we have to study what the method consists of’ is equivalent to ‘so first we have to study on the basis of what things one can become a dialectician’, for he who knows in which things dialectic has its being, also knows through which things one can become a dialectician. For it needs to be shown first on the basis of which things it is possible to become a dialectician, and then to pursue these things with a view to actually becoming one: knowing in what things dialectic resides is not by itself sufficient for being dialecticians.  
 36,1

Or the clause ‘So first we have to study what the method consists of’ is equivalent to ‘... in what things the method has its being as in its matter and instruments’. For after the knowledge of these things

comes the offering of the topics, according to which the use of these proceeds.

It may also be that the clause ‘if we have grasped the number and kinds of things arguments concern, and what they are from’ refers not just to syllogisms but also more generally to dialectical arguments. For it is agreed that the syllogisms of dialecticians have reference to problems: for the dialectical proposition ‘is a contradictory pair in question form’.<sup>302</sup> But no syllogism arises out of a question, only from the answer to such a question, for only there do we have a syllogistical premiss. However, he is not now speaking of such propositions but of dialectical ones, and these are questions. This at least is how he can claim that problems and propositions are equal in number and the same, and that proposition and problem differ only in manner.<sup>303</sup> So what he says is ‘if we have grasped the number and kinds of things dialectical arguments concern, and what they are from’. It is true that even if syllogisms do not consist of the dialectical propositions themselves put together, still the propositions for the syllogism being produced do at least derive from them: for the question is the cause<sup>304</sup> of the answer, and this is what the syllogism is made of. It is also called ‘assumption’.

Alternatively, after saying ‘if we have grasped the number and kinds of things arguments concern, and what they are from’ he does not use the phrase ‘are equal in number and the same’ of dialectical arguments but in general and universally. For the propositions and problems of the kind which are propounded and raised in the form of a contradictory pair<sup>305</sup> are equal in number and the same without qualification, but the dialectical problems are not also the same as the dialectical propositions, as Aristotle will show further on. For after showing in general how many kinds of propositions and problems there are, and what is the difference between problems and propositions, he later separates from these the dialectical problems and propositions. But even the proposition that he is speaking of now, which he says is the same as the problem, either is not dialectical (since the dialectical proposition is a ‘contradictory pair in question form’), or it is not so without qualification but the dialectical one falls within this one,<sup>306</sup> it becoming dialectical when it acquires the property of being approved. Every problem raised in this way, then, may be raised as a dialectical problem, and every proposition propounded in this way may be propounded as a dialectical proposition; but we have a dialectical problem and a dialectical proposition in the strict sense when the former has the feature of being controversial and the other features that Aristotle will mention, and the latter that of being approved.

After saying that the future dialectician needs to know the number and kinds of things dialectical arguments concern, and what they are

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from – these being the problems and propositions – he develops his account of these in general. He says the problems, which is what syllogisms are about, are equal in number and the same as the propositions, which is what arguments consist of and which are the causes of the syllogistical premisses<sup>307</sup> as well, for syllogisms consist of these. After saying that the things arguments are about and the things they consist of are also equal in number, and making it plain that what arguments are about is problems and what they consist of is propositions, he indicates that these are equal in number and the same by saying ‘every proposition and every problem’. For if the proposition and the problem bring out the same things by means of the same things<sup>308</sup> and, as he will add, differ only in the manner of their expression in wording (for the same question accompanied by ‘whether’ is a problem,<sup>309</sup> but with ‘is it the case that’ is a proposition), it is obvious that dialectical problems and dialectical propositions are equal in number and the same – for his account is of these.<sup>310</sup>

He divides the kinds of dialectical problems and shows which they are, reducing them to method. The first division of them is into three: genus,<sup>311</sup> distinctive property, and accidental.<sup>312</sup> Then, cutting up distinctive property into definition and that which besides definition is called distinctive property, homonymously with distinctive property in the generic sense,<sup>313</sup> he will show that problems are of four kinds. Now, in order to show that dialectical problems are of this number and kind, he adopts the ground for belief from induction, that if every problem and every proposition signifies one of these things and no problem makes plain anything besides these, there appear to be this number and these kinds of problems. Further on he will try to prove this through syllogism as well. The syllogism that he sets down we shall mention at the point where Aristotle does so himself, but it is also possible to syllogize as follows.

Every dialectical problem contains some predicated term, which is predicated of some term that is its subject

Every term predicated of some term that is its subject either is or is not predicated in the essence of this subject

Therefore every dialectical problem contains some predicated term which either is or is not predicated in the essence of the subject

But what is in the essence of a subject is predicated either as definition or as genus, not in any other way, and what is not in the essence of the subject is predicated either as distinctive property or as accidental, not in any other way.

Therefore everything that is and everything that is not predicated in some thing’s essence is predicated either as definition<sup>314</sup> or as genus or as distinctive property or as accidental, not in any other way.

So every dialectical problem that has a term predicated of some

thing has this either as the definition of this thing or as its genus or its distinctive property or accidental, not in any other way.

That which is predicated in the essence of a thing if it has the same extension<sup>315</sup> is the definition of this thing; if it has a larger one it is a genus. For the difference too is like this: nothing which has a smaller extension than another thing is predicated of this thing as belonging to its nature. Therefore the things predicated in the essence of a subject too are, as I said, predicated either as definitions or as kinds. If what is predicated is not in the essence of the subject, either it belongs to all of it and to it alone<sup>316</sup> and so is counter-predicated of it,<sup>317</sup> in which case it is a distinctive property, or it belongs neither to all of it nor to it alone, in which case it is an accidental.<sup>318</sup> There is no way any other mode of predication can arise naturally besides these; for it seems distinctive property differs from accidental only in applying to all of a subject and to it alone. Therefore every problem must necessarily signify through what is predicated either genus or definition or distinctive property or accidental. This syllogism is in the first figure. But we shall know more of this as we go on, since Aristotle himself will prove this through a different syllogism from the one just given.

After saying that every problem and every proposition brings out either genus or definition or distinctive property or accidental he adds, since what is predicated can also bring out a difference, ‘for the difference, since it is of genus, should also be classed with the genus’, so that no one might think that difference falls outside the items mentioned and that his division of the problems was incomplete. But why is difference ‘of genus’?<sup>319</sup> Because just like the genus it is in the essence of the thing it is predicated of, and both of them bring to fulfilment the being of each of the things they properly belong to. Moreover, difference too has a larger extension and is predicated of more subjects, and these of different species. For difference differs from genus only in not being predicated in a thing’s what-it-is<sup>320</sup> since difference, even when taken by itself, is held to bring out the species rather than the combination in which the subject thus qualified falls, whereas the genus does designate the combination.<sup>321</sup> On the other hand Aristotle has not ordered the species together with these because an inquiry into genera and differences concerns the same kind of subjects that definitions apply to, since the definition consists of genus and differences, and so do the species. So subjects must be of this kind.<sup>322</sup>

If someone were nevertheless predicating the species, he would take as the subject an individual, which has neither difference nor definition.<sup>323</sup> And again, if nevertheless there were a problem involving inquiry about a species, this would manifestly be a problem of genus,<sup>324</sup> for species, just like genus, applies to more than one indi-

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vidual and is predicated in a thing's what-it-is.<sup>325</sup> They<sup>326</sup> habitually treat genera and species as interchangeable, so as to make these terms apply to the same things.

**10 101b19** Now since one part of distinctive property signifies the what-it-was-to-be<sup>327</sup> [(this), but another part does not signify this, let distinctive property be divided into the two said parts, and let that which signifies the what-it-was-to-be (this) be called definition, and the remaining part be addressed by the name that was given of both of them in common, 'distinctive property'. It is clear, then, on the basis of what has been said, that on the present division the result is that four things in all come about, either distinctive property or definition or genus or accidental. But let no one suppose that we are saying that each of these said on its own is a proposition or problem; what we are saying is that both the propositions and the problems arise from these.] (101b19-28)

Aristotle gives the division of the distinctive property and shows that it encompasses two species of problems. For 'since one part of distinctive property signifies the what-it-was-to-be (this)' and so brings out the essence of the thing whose distinctive property it is, but another part of it does not signify this, and since the what-it-was-to-be this is a definition, therefore let distinctive property be divided into (1) definition and (2) that distinctive property which does not signify the essence of what it is a distinctive property of, and let this latter be called 'distinctive property' homonymously with distinctive property in the generic sense. Many things are homonymous with the common things<sup>328</sup> and the genera, as the black ink<sup>329</sup> with which we write is homonymous with blackness in general, as Man the victor in the Olympics in relation to man in general,<sup>330</sup> and as justice in general and in the particular are homonymous.<sup>331</sup> So distinctive property without qualification may be defined as what belongs to all of a subject and to it alone, and its division is according as it does not or does, namely through the definitional formula, signify the subject's essence.

20 After dividing distinctive property into two, Aristotle says it is plain that by the present division there are just four kinds of problems. Having mentioned the names of these problems he continues 'let no one suppose that we are saying that each of these said on its own is a proposition or problem'. What he means is either that we should not be supposed to maintain that the very names mentioned are problems (since if that is how we said it was it turns out there are just four problems in all: definition, genus, distinctive property or accidental. In fact a name cannot be either problem or proposition);

or that it should not be supposed that the definition, genus, distinctive property or accidental simply as uttered is either a dialectical problem or a dialectical proposition: they need a particular construction and manner of expression if there is to be produced a problem or proposition. For he who says 'Man is a two-footed terrestrial living being' has not expressed a dialectical problem or proposition, nor has one who says 'Man is musical', 'Man is a living being' or 'Man is capable of laughter'.<sup>332</sup> Only when these have been shaped according to certain figures are problems and propositions made from them: the problem 'Whether man is a two-footed terrestrial living being or not?' is made from the definition of man, while not itself being this definition; and so in the other cases, as Aristotle brings out in what follows.

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**101b28** Problem and proposition differ in their manner. [For if it is said thus, 'Is terrestrial two-footed living being the definition of human being?', and 'Is living being the genus of human being?', a proposition is produced; but if (it is said) 'Whether terrestrial two-footed living being is or is not the definition of human being?', a problem is produced, and so for other instances. So it is plausible that problems and propositions are equal in number, for out of every proposition you can make a problem by changing its mode.] (101b28-37)

After saying that problem and proposition signify the same (either of them signifying one of the four problems), he now states the difference between them, by which one of the two is called problem, the other proposition. At the same time he shows how problems are made of the four items mentioned before. He is speaking of the dialectical proposition, for that is a question. He says the difference between them is in the manner of their expression: for if we put 'whether' in front of the contradictory pair<sup>333</sup> we get a problem, e.g. 'Whether the world is spherical or not?', but if we put 'Is it the case that' before it we have a proposition, e.g. 'Is it the case that the world is spherical or not?' Aristotle, however, expressing himself elliptically, omits this.<sup>334</sup>

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This difference between problem and proposition Aristotle has set out according to one use and convention. In fact the definition of the proposition in question form<sup>335</sup> also fits the problem: for a 'contradictory pair in question form' is also that question by which it is granted to the respondent to choose the part of the contradictory pair that he prefers,<sup>336</sup> and this is what a problem is too. Alternatively they could be said to differ in that the proposition is a request for giving one part of the contradictory pair as an answer, whereas the problem is a request not for an answer but for proving one part of the contradictory

pair. For the same reason the problem is considered to resemble an informative<sup>337</sup> question (for it is a request for establishing and proving something and for a dialectical argument), but the proposition a dialectical question. But if one wishes to distinguish them by the fact that the problem puts the contradictory pair in question form but the proposition puts one part of the contradictory pair in question form, on the ground that this is how Aristotle expresses himself (for in the case of the problem he says 'Whether two-footed terrestrial living being is the definition of man or not', adding 'or not', but with the proposition he is contented with just the one part, saying elliptically 'Is it the case that living being is the genus of man?') – if someone states this as the difference between them, then how can the definition of a dialectical proposition still be 'contradictory pair in question form', which is Aristotle's own definition of it? Nor is it on this account still true that the difference between them is found only in the mode, if the problem also encompasses a contradictory pair but the proposition just one of its two parts.

After showing the difference in manner of expression between problem and proposition in the case of definition and genus, he adds 'and similarly with the others,' referring to distinctive property and accidental, evidently to the effect that these will show the same differences between problem and proposition. Having said that the difference between them is only in the manner of their expression, he with good reason goes on to say 'So it is plausible that problems and propositions are equal in number', again adding the reason for this.

### **<1.5 Definition, distinctive property, genus and accidental>**

**101b37** It must be stated what are definition, distinctive property, genus, and accidental.

After showing that there are four species of problems and which they are, Aristotle now proposes to say of each of them what it is, and states:

**101b38** A definition is the phrase which signifies the what-it-was-to-be<sup>338</sup> (this or that).

First he produces the account of the definition, for the definition is something more complete and contains all the other (predicables)<sup>339</sup> within itself: genus, distinctive property and that which holds of a thing, i.e. the accidental, are all contained in the definition.<sup>340</sup> Next he defines these others as well.

He explains the meaning of the name of the definition: this name, *horos* or *horismos*, has been transferred from the demarcations called

*horoi* used on plots of land, by which these are circumscribed and separated off from others. The fact that he gives a definition of definition does not imply he will go on unto infinity: the present will be an account of every definition insofar as it is a definition, we will not have a series of definitions each one defining the last.

He says the definition is the account signifying the what-it-was to be (this), which holds of this account alone. He uses the phrase ‘what it was to be (this)’ taking it together as one compound nominal phrase to mean ‘the account that signifies what it is for the thing defined to be’, i.e. an account so as to bring out what it is to be, for the thing it is the definition of. For he does not here use the verb ‘was’ as bringing out the past, but instead of ‘is’.<sup>341</sup> This is common usage: someone saying ‘That was (the case)’ says what is equivalent to ‘That is (the case)’, using ‘was’ instead of ‘is’,<sup>342</sup> and someone saying ‘Who was that knocking on the door?’ says this instead of ‘Who is that knocking on the door?’<sup>343</sup> For the definition brings out the essence and that which each thing’s being resides in, not some accidental or other thing somehow attending it; for while there are several things that hold of each thing, the definition separates off the others, bringing out among the things holding of it just those by which it is defined, in which its being resides, and in which it differs from others, making it what it is said to be.

The verb ‘to be’ is a necessary addition to the verb ‘was’, not a purposeless or redundant one.<sup>344</sup> For if ‘was’ means ‘is’, then ‘the phrase which signifies the what-it-was’ will be the same as the ‘phrase which signifies the what-it-is’<sup>345</sup> – i.e. of the thing in question, the subject of the account. But if so, then every phrase which contains any of the things predicated of the thing in question in the what-it-is, will be a definition of it. However, the genera are predicated of the species in the what-it-is, synonymously.<sup>346</sup> So the account placing the species within the genus would then be a definition of the species bringing out the what-it-is – which is false. So the verb ‘was’ is not by itself sufficient, as some people think – first of all Antisthenes, it is held,<sup>347</sup> and then some of the Stoics: on the contrary, the verb ‘to be’ has been added<sup>348</sup> with good reason, for the account which brings out what is the thing’s being is not the one predicating of it either its genus or one of the other things in the what-it-is: the species’ being is not just its genus being predicated of it, insofar as the species is not identical with its own genus.<sup>349</sup>

Aristotle’s (expression) is equivalent to ‘the account which brings out the essence of the thing, that by which the thing has its being’. Those who maintain a definition is an ‘account expressed adequately by analysis’,<sup>350</sup> meaning by ‘analysis’ the unfolding of the thing defined into simple factors – this under its main headings – and by ‘adequately’ its being neither redundant nor deficient, would seem to

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maintain that definition does not differ in any way from giving the distinctive property. For ‘animal capable of laughter’ is also an account, and signifies man without redundancy or omission, since its extension is neither larger nor smaller than that of man. But in fact

5 an account given through the distinctive property is very different from a definition in that it does not signify in what resides man’s being; that this is not in his capacity for laughter is plain from the fact that what carries a thing to completion (and perfection) are its activities according to what it is,<sup>351</sup> whereas laughing is not a completion (and perfection) of man.

**101b39** What is rendered<sup>352</sup> is (102a1) either a phrase for a

name<sup>353</sup> or a phrase for a phrase; [for it is also possible to define some of the things which are signified by a phrase. But with all those who, in whatever way they do it, offer their rendering by a name, it is plain that they do not render the definition of the thing, seeing that every definition is a phrase. By contrast, something like the following, that ‘fine is what is fitting’ is definitional too; and so is ‘whether sense-perception and knowledge are the same or different’: for with definitions too most of the debate is as to whether (a given definition) is the same (as) or different (from what is being defined).]<sup>354</sup> In a word, let us call ‘definitional’ all those (problems)<sup>355</sup> which fall under the same method as the definitions. That this applies to all those mentioned so far is plain from the facts. For if we are able to argue dialectically that something is the same and that something is different, then we can in the same way be equipped for dialectical arguments against definitions: for if we show that one of these is not the same, we have demolished its claim to be a definition. However, what has just been said does not convert: for it is not enough, with a view to establishing a definition, to show that it is the same. By contrast, with a view to refuting it, it is sufficient to show that it is not the same.] (101b39-102a17)

After defining the definition, Aristotle states how it is given and what is the original (expression) it comes to replace. Either a definition is rendered ‘for a name’ (for he has used ‘what is rendered is either a phrase for a name’ as equivalent to ‘a phrase of the kind we have said

15 the definition is, for a name’, as when we define man by saying ‘Man is a two-footed terrestrial living being’: for in place of the name ‘man’ we have given the phrase, i.e. definition, ‘two-footed terrestrial living being’); ‘or a phrase for a phrase’, i.e. a definition in place of another phrase. This happens in cases where the genus to be defined cannot  
20 be captured by one name, as with ‘terrestrial living being’, ‘winged living being’ or ‘aquatic living being’. For in defining each of these the

substitution we make is of one phrase or definition for another phrase: we give a definition of the phrase ‘terrestrial living being’ by saying it is a being that is animate, capable of perception and naturally adapted for inhabiting land. But the definition can also be substituted for phrases giving an account based on a distinctive property, which are not definitions, e.g. ‘mortal living being gifted with reason’ for ‘living being capable of laughter’ or ‘living being receptive to knowledge’. For being receptive to knowledge is a distinctive property of the human: the gods are not receptive to it, for potentiality is not found in them.<sup>356</sup> It is also possible for one phrase to be replaced by another, when a definition is given of each or either of the components of the original phrase. For if we can define either of the items contained in the phrase, then we can also give a definition of the phrase as a whole: thus the definition of the phrase ‘Man walks’ will be ‘Two-footed terrestrial living being which moves by means of legs in locomotion.’<sup>357</sup> For Aristotle does not say that a definition is given in place of a definition.<sup>358</sup>

Seeing that often in the interest of distinctness what is rendered for one name is another name,<sup>359</sup> as when someone calls ‘good’ what is useful or ‘just’ what is equal, Aristotle does not call this rendering a definition: for it has been laid down by us that the definition is a phrase. Nor, clearly, does one render a definition by giving a name in place of a phrase.<sup>360</sup> For it does occur that a name is given instead of a phrase: he who says ‘the praiseworthy good is noble’ replaces a phrase with a name. But a noun cannot be a definition. Still, he also calls those renderings ‘definitional’ which substitute a better known name so as to clarify a less transparent one, so this kind too can be brought under definitional problems. He also calls those problems definitional in which it is inquired whether one thing is the same as another,<sup>361</sup> e.g. whether perception is the same as knowledge or different, and whether dissoluteness and lack of self-control, or self-control and sanity, are the same or not.<sup>362</sup> The reason he gives why these are definitional too, is that in problems about definitions too most of the search is to find out whether the definition that is given signifies the same thing as the name or phrase it replaces, or something else: the first requirement of a definition is that it should be the same.<sup>363</sup> In general, Aristotle says, all those problems are called definitional which fall ‘under the same method’ as definitions: those which fall under the method dealing with definitions are definitional, and so are all those in which it is inquired whether things are the same as each other or not the same. He also brings out in what way they fall under this: the method by which we are able to show one thing to be the same as or different from another is also used for definitions. He adds in what way it is thus used: by showing that a phrase offered as a definition is not the same as that of which it is

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offered as a definition, we have at once shown that it is not a definition. However, it is not the case that just by showing that a phrase does signify the same as what it was meant to be an account of, we will at once have shown that it is a definition, for being the same is a feature of other accounts as well. It is true that the definition must have this characteristic of sameness, but it does not follow that if a thing is the same it is thereby a definition as well: definition and sameness do not convert, nor do they have the same extension, nor are they counter-predicated of each other. That is why if a thing is not the same as another, it is not its definition, but if it is the same it still does not necessarily have to be its definition: ‘the same’, as Aristotle will show a little further on,<sup>364</sup> is said in more ways than one, and neither being the same in genus nor being the same in species amounts to being a definition – not even being the same numerically is tantamount to that.

So it has been shown both that sameness is useful with a view to definitional problems, and that the inquiry into sameness and into definition are not the same in all respects. For from the fact that visible by itself and colour are the same, and so are audible and sound, and flavour and what can be tasted, it does not follow that the definition of colour is either ‘visible by itself’, or as some people define it, ‘the perceptible quality proper to sight’ <, and so on>.<sup>365</sup> For these things are not what they are insofar as they are colour, or sound, but only in their relation to a perceiver.

Having said these things about definition as being sufficient with a view to the method before us – he offers a more theoretical and more exact treatment of definition both in the *Posterior Analytics* and in the *Metaphysics* – he proceeds to his account of the distinctive property. We should note that Theophrastus classifies the problems about sameness under those of genus, as he does those arising from differences; for he says ‘Let us set down both difference and sameness as belonging to genus’.<sup>366</sup> This may count as additional information from an outside source.<sup>367</sup> – Aristotle’s definition of the distinctive property runs as follows:

**102a18** A distinctive property is that which, while it does not bring out the (thing’s) what-it-was-to-be, yet holds of and is counter-predicated of the thing alone. [For instance, it is a distinctive property of human being to be receptive to literacy: for if something is a human being, then it is receptive to this, and if it is receptive to this it is a human being. For no one calls a distinctive property that which may hold of another (subject), such as sleeping of human being – not even if it happens at some time to hold of this alone. So even if such a thing is called a

distinctive property, it is called a distinctive property not without qualification but at some time or relatively to something: for it happens that being to the right is said as a distinctive property at some time, and being two-footed as a distinctive property relatively to something, for instance of human being relatively to horse and dog. But it is plain that none of those things which may hold of another (subject) are counter-predicated (of their subject): for it is not necessary if something is asleep that it is a human being.] (102a18-30)

The distinctive property has in common with the definition both that it holds of the thing alone and that it is counter-predicated of it, i.e. that it holds of all of it, for what belongs to all of a thing and to it alone is counter-predicated of it. The difference between them is in that the definition brings out the what-it-was-to-be and essence of the thing, and necessarily has to be a phrase, whereas the distinctive property need neither be a phrase nor bring out the essence of the thing whose distinctive property it is, but signifies either a condition of it, as with man having flat nails or standing erect, or a capacity, such as being receptive to knowledge, being capable of laughter, or an activity, such as the divine body's eternal motion. This is why one thing can have several distinctive properties but not, speaking precisely, definitions, if we take it that the essence of each thing, which the definition brings out, is one.

That the distinctive property does not bring out the essence of that of which it is a distinctive property, as e.g. the capacity for laughter or receptiveness to literacy does not bring out the essence of man, is, as we said before,<sup>368</sup> plain from the fact that each living thing is held to have received its completion (and perfection) at the time when it is without hindrance actively exercising the potential by which it has its being.<sup>369</sup> For a complete (and perfect) horse is that which is without impediment active in accordance with the potentiality which makes it a horse, and so if the essence of man were in his capacity for laughter, a complete (and perfect) man would be one who is laughing successfully and without hindrance. But it is absurd to place man's completion (and perfection) in his laughing without hindrance.

So what is to be said of 'two-footed terrestrial', by which people also define man? It may be that it is either false to divide distinctive property and definition by this criterion,<sup>370</sup> or that phrases of this kind are held to be definitions because they separate the thing in question from all others through the things which hold of it. Definitions in the strict sense will be those that in addition to the feature last mentioned also contain that by which the thing defined most of all has its being, as man by his gift of reason; which is why each thing has just one definition in the strict sense. For the definition must consist of

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differences: these are what divide a genus into its species not according to accidentals but to its essence. The distinctive property is not such a difference.

Aristotle provides a foundation for his claim that the distinctive property has to be counter-predicated of the thing, by saying 'For no one calls a distinctive property that which may hold of another (subject), such as sleeping of human being – not even if it happens at some time to hold of this alone.' This last addition is because sometimes people call a 'property' one of the things that hold of the thing alone but are not counter-predicated of it, yet this is not called a distinctive property without qualification, but only at a certain moment. Thus the fact that things are to the right of some other thing is a distinctive property of them at some moment, and so can being seated be a distinctive property of a thing at some time.<sup>371</sup> This would be an instance of such a distinctive property which is not relative.<sup>372</sup> Being two-footed is a distinctive property of man in relation to living beings not two-footed, but not a distinctive property without qualification: it is a distinctive property of man relatively to horse, dog or any other living beings that are not two-footed, but not relatively to bird. It is something that obtains always, yet not as a distinctive property without qualification, but always relatively to the ones mentioned.

Things can also hold of the subject<sup>373</sup> alone, yet not as distinctive properties, as do the activities springing from the potencies which are indeed his distinctive properties: counting, using speech, laughing, pickling. These are not themselves properties because they do not belong to all of the subject; his potencies do, and do so always, but his activities not to all of man at the same time, nor always.

Obviously none of the things that may also hold of some other thing can be counter-predicated of the thing in question either, for what is counter-predicated must necessarily have the same extension, and we have laid down that the distinctive property is counter-predicated of the thing.

**102a31** Genus is that which is predicated, in the what-it-is, of several things differing in species. [Let all those things be said to be predicated in the what-it-is which are fittingly rendered as replies to the question what the thing at issue is, just as with human being it is fitting, when asked what the thing at issue is, to say that it is a living being. Generic is also (the problem) whether one thing is in the same genus as another or in a different one: for such a one too falls under the same method as the genus. For when we have established by dialectical argument that living being is the genus of human being, and likewise

of cattle, we shall have established that these two are in the (102 b1) same genus; and if we show that it is the genus of the one but not of the other, we shall have established that they are not in the same genus.] (102a31-b3)

For the genus too Aristotle gives the definition by which he separates it from the other <predicable>s of which it holds that they are predicated of more than one thing. <For this also holds of species><sup>374</sup> but of the differences too. He separates it from the species by adding 'differing in species'. For when the things under it<sup>375</sup> differ from each other in species, like man, horse, dog, then genus is that 'which is predicated' of them 'in the what-it-is'. For the species is not likewise predicated of things differing in species: it is predicated in the what-it-is, of several things differing in number, in virtue of which it is a species. For when something is predicated of more than one subject in the what-it-is, and these underlying subjects may differ in species, then this must necessarily be a genus.

The difference too is predicated of several things differing in species, yet not in the what-it-is, for then the account<sup>376</sup> of genus and of difference would be the same; as Aristotle states elsewhere,<sup>377</sup> the difference is predicated of things as their difference rather than in the what-kind-of,<sup>378</sup> for it brings out what kind of thing a thing is. That is why we should not take what is said in the *Categories*,<sup>379</sup> that differences are predicated of a subject, to refer to differences in the strict sense, but to those already bound up with their matter. For what is predicated of a subject is all predicated in the what-it-is of that subject; but if they are predicated in the what-it-is, the differences will be genera, not differences.

Even if the accidental is predicated of several things differing in species, it seems to differ from the genus in not being in the what-it-is.

Being predicated 'in the what-it-is' is explained by Aristotle himself: 'all those things which are fittingly rendered as replies to the question what the thing at issue is' are predicated 'in the what-it-is'.

Aristotle has just said that difference and problems arising from differences are problems of genus, as e.g. 'whether the dog is gifted with reason or not?' Difference in the strict sense is that by which a genus is cut up into species; for not everything that differs from another thing differs from it by a difference in the strict sense: in most cases the difference between two things is in accidentals, which are called differences in a more general sense.

Aristotle also calls problems of genus those in which it is inquired whether one thing is in the same genus as another or not – just as inquiring whether one thing is the same as another was a problem of definition.<sup>380</sup> He also shows in what way they are problems of genus: someone who is going to show that certain things, e.g. horse and man,

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are in the same genus, has to show that living being is the genus both of horse and man, and these are problems of genus. Showing that a thing is not in the same genus as another is also a problem of genus, e.g. that seeing is not under the same genus as shouting, since the latter comes under doing, and this is not the genus of seeing, which  
 10 is a form of undergoing. Thus it is shown that seeing and shouting, though similar in the form of the wording, are not in the same genus. These things are shown through the topics relating to genus.

**102b4** Accidental property is that which is none of these things, neither definition nor distinctive property nor genus, and yet holds of the thing in question; and that which may or may not hold of any one and the same thing [as sitting may or may not hold of the same, and similarly white: for nothing prevents the same thing from being now white, now not white. Of the definitions of the accidental the second is the better one, for when the first is expressed it is necessary, if one is to understand it, that they should know beforehand what are definition, genus and distinctive property, whereas the second one is complete in itself with a view to recognizing what is meant by it.] (102b4-14)

Aristotle gives two accounts of the accidental: one that points it out by negation of the <predicable>s mentioned before, since what holds of a thing in none of the ways mentioned before is an accidental, the other derived from the nature of the accidental itself, since what holds  
 20 of a thing in such a way that it might or might not hold of it is an accidental.

Aristotle prefers this latter account, and tells us why. He who is to get to know any thing by denying certain things of it must necessarily first get to know these other things the denial of which is to bring out the thing in question, whereas he who is to get to know this thing on the basis of the thing itself needs no other thing to know this one: an  
 25 account of this kind signifies the essence and nature of the thing itself, given that a definition is ‘the phrase which signifies the what-it-was-to-be (this or that)’, as has been mentioned,<sup>381</sup> and each thing’s being is in a holding-of and an affirmation.<sup>382</sup>

So an account of a thing based on denying certain things of it is not a definition in the strict sense. Why then does Aristotle lay down both  
 49, 1 accounts, not just the one he prefers? To indicate that accounts are offered in this way too. Or because he will use an account of this kind of the accidental for what follows, when he establishes through the account of the accidental that there are just so many kinds of problems.

And arguably the former way of giving the definition is superior in general but this latter one is necessary in some instances, as with

'snub-nosed'. For with the accidental the second account offered is held not to encompass the accidental as a whole, whereas the first does: for it may be inquired whether the account saying that an accidental is what may 'hold or not hold of any one and the same thing' encompasses the entire nature of the accidental. For if this is what the accidental is, then under what genus would come those accidentals which hold of a thing so as to be inseparable from it,<sup>383</sup> yet neither in its essence nor as distinctive properties of it, as e.g. being snub-nosed belongs to nose? For if these are not accidentals, they will either be genera or differences or distinctive properties or definitions. But it is absurd to say they are any of these; therefore this would seem to be yet another kind of thing holding of a thing besides the four mentioned. But if that is so, then this could not be the number of kinds of problems and propositions either, but there would have to be some fifth kind of problems, in which are predicated the things holding of a thing in this way.<sup>384</sup> So in this respect the first account that was offered is superior.

In fact the reason why snub-nosed is inseparable from nose is not that the same nose<sup>385</sup> does not become both snub and hooked<sup>386</sup> (for that is why being snub-nosed is not a difference of nose either),<sup>387</sup> but because the snub-nosed seems to include nose within itself: for if snubness is concaveness in a nose, then being the combination of these two it is probably accompanied by and goes together with nose, and is inseparable from it as it is from concaveness, snub-nosed being what is both of these things together.<sup>388</sup> But in this way it would seem snub-nosedness is no longer an accidental, but the accidental together with what it is an accidental of, and concaveness now is the accidental that may either be or not be present in the nose.<sup>389</sup>

It is possible that 'may or may not hold of any one and the same thing' does not make plain that a thing that has belonged to another thing must unconditionally remain capable both of belonging and of not belonging to that thing, but just that the presence of the accidental is not needed with a view to the thing being or not being some thing.<sup>390</sup> For even apart from it it would be the same thing: the nose would still be there<sup>391</sup> even without snubness. Now that whose absence does not deny the thing in question is, if it holds of it so as to be inseparable from it, what 'may or may not hold of' it, for contingently holding or not holding of the same thing signifies being outside the nature and essence of this thing, even without being capable of actually not holding of it. And so accidental will be that which holds of a thing, but whose denial does not deny this thing.

One might inquire whether this is how white holds of snow and swan, and black of pitch, for these are held to be somehow of the thing's essence. In fact we have to call these accidentals too, precisely for not being in the essence of what they hold of: the essence of snow

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10 or of pitch is not in their being white or black, these are things which attend their essence, inseparable accidentals.<sup>392</sup>

It might further be argued that even if they cannot hold and not hold of these things,<sup>393</sup> still they can hold or not hold of others, and that any thing that is in such a relation to some of the things that are will be an accidental.<sup>394</sup> In fact this is not true either: being hot, while holding of some thing in such a way that it may also not hold of it, is not an accidental of fire. But whiteness in snow would seem to be<sup>395</sup> either its genus or a definition or a distinctive property; yet it cannot be called any of these in the case of snow. But it cannot be a difference either, for colour is not considered to be a specific difference of a body.

These cases, then, would seem to involve something more than the other accidentals, in that they necessarily attend the matter with the qualities and modifications<sup>396</sup> that make up their being. Thus a certain coagulation of a certain type of body – e.g. of cloud, which is the material of snow – generated by excessive cold and accompanied by an internal deficiency of air, is necessarily followed by whiteness: the cause of such a colour is a deficiency of the air within the cloud, the coagulation of the cloud and the friction of the air which in this process is caused by excessive cold and prevents the air being separated off. For air becomes white by being rubbed and stirred – which is why foam is white – and rubbing and stirring occur in the coagulation of the cloud, as the air within it is condensed and shut away into its depth and hindered from being separated off. These other features belong to the essence of snow, but the whiteness attending them is a modification and an accidental of it. It would seem to be an accidental of it, because it is not something that brings to fulfilment its essence: for if white is neither the matter nor the form of snow, it is not in the essence of snow; it becomes inseparable from it as an epiphenomenon of what happens to its matter in its change into such a form as we have described.<sup>397</sup> However, it is no longer possible in this case to say

25 that it may also not hold of the thing in question. In the same way it is shown that female is also a mode and an accidental.

This is why the account which brings out the accidental by denying the other <predicables> seems to encompass all the accidentals better than the second account Aristotle gives, which is indeed why he gives it. For though it is better, as he says,<sup>398</sup> to define in the other way, yet where we cannot encompass all of the thing defined by an account of this type, we have to be content with bringing it out through negation.

This feature of the accidental is due to its not being of one single nature: for the nine kinds<sup>399</sup> besides substance are all accidentals. This is why we cannot give one single account of it. A distinctive property of it might seem to be that it is in a subject, given that all essence is not in a subject, but both species and differences in that

15 essence are separated off by this ‘being in a subject’.<sup>400</sup> However,

Aristotle waives such precision of speech as being foreign to the present study, and contents himself with the accounts of the accidental given above.

**102b14** To the accidental<sup>401</sup> let us add<sup>402</sup> the comparisons based upon it in any way [such as whether the noble or the expedient is to be preferred, and whether the life which follows virtue or that which follows enjoyment is more agreeable, and whatever else is stated in terms similar to these: for with all of these the subject of inquiry is of which of the two that which is predicated is an accidental to a higher degree.] (102b14-20)

Just as Aristotle brought problems about sameness under problems based upon definition,<sup>403</sup> those based on differences under those based on genus, and things that are a distinctive property at some time or in some relation under those based on the distinctive property, so he brings all problems involving comparison under those based upon the accidental. For only accidentals are involved in comparison, in virtue of which<sup>404</sup> more and less are neither genus nor definition nor distinctive property of a thing, but this modification affects accidentals only.

For of these it is sometimes investigated whether one thing does or does not hold of another, as when we inquire whether wealth is good or not,<sup>405</sup> whether self-control is a virtue or not, and of which of some pair<sup>406</sup> a thing holds to a higher degree, e.g. goodness of health or of wealth, and whether living pleasurable holds more of a life in accordance with virtue or of a life of enjoyment. For in this kind of problem the question is of which of two things the thing at issue holds to a higher degree, and this thing is an accidental.

The 'in any way' is added either in place of 'whatever aspect the comparison concerns', as Aristotle indicates by the examples he uses, or because comparing goes on in several ways: it may be of which of two subjects a predicate holds to a higher degree, as in 'Whether wealth or health is to be preferred?', or which of two predicates holds of a subject to a higher degree, e.g. of health that it is pleasurable or that it is useful, and sometimes whether one thing holds more of a second thing or a third thing more of a fourth, e.g. whether goodness holds more of health or badness more of sickness. For in whatever way comparisons are made, they are expressed on the basis of the accidental. Comparing is also done as to the more and the less and the equally so,<sup>407</sup> for the following are problems of comparison: if health, being preferable to wealth, is in itself not to be preferred, then neither is wealth; if pleasure, being more of a good than a goal, is yet not good, then neither can it be a goal; by contrast<sup>408</sup> if wealth, being less of a good than health, is still a good, then so is health; and if health, being less of a good to people living in peace than to people at

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war, yet is a good to the former, then it is a good to the latter as well. Comparisons involving an equal degree are of the same type. Here either one thing is said about two things, or two things about one, or two about two, as Aristotle himself remarks in his topics for comparisons.<sup>409</sup>

But the phrase ‘in any way’ may also have been added because problems connected with counsel also are in a way comparative, and so could be brought under those based on the accidental as well. For the problems ‘Whether one should marry or not?’ and ‘Whether one should beget children or not?’ are also comparative, for the inquiry here is as to which of the two terms in the problem is preferable. Or the inquiry is as to<sup>410</sup> whether it is preferable to marry, or to have children, or whatever is laid down in the problem. But these things are all accidentals: the inquiry is as to whether being preferable is an accidental of the subject. So problems of this type can be brought under accidental.

There are those who claim that problems of this type are based on genus, since the inquiry in them is as to whether the preferable is a genus of the thing in question. In fact, however, the inquiry is not as to whether being preferable is predicated of these things in the what-it-is, but only whether it holds of them; and those who have to refute the thesis do not show that one thing is not the genus of another thing, e.g. the good not the genus of pleasure, but that it does not hold of it. By contrast in problems based on genus, ‘genus’ has to be explicitly added, e.g. whether this is the genus of that or not: for things<sup>411</sup> that are propounded<sup>412</sup> without such additions are propounded as accidentals.

The question under what they should be classified also arises with regard to such problems as whether there are gods and whether there is such a thing as the soul. Some people say that all problems of this type are problems of genus, since the inquiry here is as to whether the thing in question is in that which is as in its genus.<sup>413</sup> In reality these too seem to come under accidental: for those conducting such inquiries inquire whether it is an accidental of these things to be, or to be in the genus of things that are, even with things that are not considered to have that which is for their genus.<sup>414</sup> With these too the investigation is about holding-of without qualification, not about the manner of holding-of; and the inquiry into holding-of without qualification<sup>415</sup> is through the accidental. Nor does the problem contain the explicit addition ‘Whether the gods are in that which is as in a genus’.

**102b20** It is plain from the things themselves<sup>416</sup> that nothing prevents the accidental from becoming what is a distinctive property at some time and relatively to something [for instance

sitting, which is an accidental, will then be a distinctive property when some one person alone is sitting, and when some one person is not the only one sitting it will still be a distinctive property relatively to those not sitting. So nothing prevents the accidental from becoming a distinctive property whether relatively to some thing or at some time; but it will not be a distinctive property without qualification.] (102b20-6)

Aristotle claims that what is said is plain from the accidentals themselves and their definition. For if accidental is what may or may not hold of one and the same thing, then clearly that which may or may not hold of several subjects may well hold of just one of them at a given moment. Being seated, which is an accidental of this subject here, can become a distinctive property of it ‘at some time’: when no one else is seated; or ‘in relation to something’: i.e. to those not seated.<sup>417</sup> But nothing that is an accidental in this way is a distinctive property without qualification.

Aristotle had referred to this distinctive-property-by-accident before,<sup>418</sup> when he said that ‘no one calls a distinctive property that which may hold of something else’: for even if such a thing is called a distinctive property, it is still not called one without qualification but a ‘distinctive property at some time’ or ‘ – in some relation’.

### <1.6 Relations between the predicables>

**102b27** But it should not escape us that the things bearing on genus, distinctive property and accidental will also fittingly be said with a bearing on definitions as well. [For by showing that what comes under the <proposed> definition does not hold of <the subject> alone (just as in the case of the distinctive property) or that what is given <as a genus> in the <proposed> definition is not the genus, or that one of the things mentioned in the account<sup>419</sup> does not hold <of the subject> (which can also be said in the case of the accidental), we shall have denied <its being> the definition. So even by the account given earlier<sup>420</sup> all the items enumerated<sup>421</sup> are in a way definitional. Yet one should not therefore look for one method to apply to all of them universally: for this is not easy to find and, if it were found, would be utterly indistinct and hard to use for the study before us. If for each of the kinds distinguished a method is given which is peculiar to it, it becomes easier to pursue the goal before us on the basis of what properly belongs to each of them. (103a1) So we must, as was said earlier, make a division in outline and attach to each (class) those of the remaining items which most properly belong to it, and call these definitional and generic. By

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and large the said attachments of each item to its (class) have already been made.] (102b27-103a5)

Having given a division of the problems, showing there are four kinds of them and bringing out which these are and how each differs from the others, Aristotle says ‘it should not escape us that the things said bearing on genus, distinctive property and accidental’ – i.e. those by means of which we may find out and prove that what is offered is not a distinctive property, and similarly not a genus or not an accidental – ‘will also fittingly be said with a bearing on definitions as well’: for that something is a definition can be excluded by the same means by which it is excluded that it is any of these others.<sup>422</sup> For a (proposed) accidental is denied when it is shown that it does not hold of the thing in question, since what does not hold of a thing cannot be an accidental of it; a (proposed) genus too is denied if it does not hold of the thing, but the denial that is peculiar to a (proposed) genus is when it is not predicated in the essence and in the what-it-is;<sup>423</sup> and a distinctive property too is denied of a thing if it does not hold of it, but it is denied in the way peculiar to it when it does not hold of all of the thing and of it alone: for what does not hold of a thing in precisely this way is not a distinctive property.

By each of these it is also possible to refute a (proposed) definition: for if the account given of a thing does not hold of it, it cannot be its definition; and if it does hold of it but not as part of its essence, and what is given in the (proposed) definition is neither<sup>424</sup> its genus nor its difference, then it will not be its definition either. But even if what is given in the (proposed) definition is the genus or<sup>425</sup> the difference of the thing, and yet the account does not hold of all of it and of it alone, it will not be its definition. For it is required that the definition holds of<sup>426</sup> that thing for which it is given as its definition, and that that which in the definition is given as genus of a thing, and its differences, are in fact its genus and differences, and hold of all of that of which they are given as such, and of it alone, and besides these that they signify the what-it-was-to-be and essence of it: for this is a distinctive property of it, and distinguishes it from the others.<sup>427</sup>

Given that this is so, ‘even by the account<sup>428</sup> given earlier all the items<sup>429</sup> enumerated are in a way definitional’: for he said a little earlier<sup>430</sup> ‘in a word, let us call “definitional” all those (problems)<sup>431</sup> which fall under the same method as the definitions’. For just as the inquiry into sameness was definitional in this sense (for by showing that one thing is not the same as another, it seems we have also proved that it was not the definition<sup>432</sup> of that thing), so all problems may be taken to be definitional: for by the denial of each of these things found in them,<sup>433</sup> the definition is denied as well, so in this sense these would fall under the same method as the definitions.

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After saying this and showing how it is possible to call all problems in some sense definitional, Aristotle goes on to say 'Yet one should not therefore look for one method to apply to all of them universally'.<sup>434</sup> If what serves to refute the other things<sup>435</sup> can also be used for the refutation of definitions, this does not yet make it necessary to classify these others with the definitional ones<sup>436</sup> and call these definitional too: 'for this is not easy to find and, if it were found,<sup>437</sup> would be utterly indistinct and hard to use for the study before us'. What Aristotle says is that one should not look for some one 'method universally' applying to all <predicables>, so as to call all problems definitional and conduct the establishing and refutation of them as though they were, as if the topics relating to definition could fit all of them<sup>438</sup> – which is neither easy nor even possible.

For it does not follow, if refutations of the other <predicables><sup>439</sup> refute a (proposed) definition, that arguments establishing them can be used to establish a definition. For the account<sup>440</sup> establishing that what is offered is an accidental through showing that it may or may not hold of the thing, does come under the accidental, but it not only does not contribute anything towards proving one thing the definition of another, but in fact is such as to deny a thing's claim to be this: for the way an accidental holds of a thing is not the same as the way a definition does.

Nor does every refutation of a claim that something is an accidental, deny (its being) the definition: for he who shows that what holds of something is a distinctive property of it has denied (its being) its accidental, but not (its being) the definition. So it is not true that all of them<sup>441</sup> are fit for definitions as well.

And he who shows that one thing is predicated of another in the what-it-is and in its essence, and with the same extension, not said of a greater number, demolishes its claim to be the genus, but not its claim to be the definition of the thing; in fact he who shows that what is predicated of a thing and has the same extension as this thing signifies its essence, at once demolishes its claim to be a distinctive property and establishes its claim to be the definition. So not only are the things that serve to establish the other <predicables> not<sup>442</sup> useful for definitions, but the things said with a view to the refutation of these<sup>443</sup> are not even all of them useful for the refutation of a (proposed) definition.

For these reasons it is not possible to call all problems definitional, or to find some one 'method universally' applying to them. Theophrastus in his *Topics*<sup>444</sup> took trouble to offer such a single general method: he separated the accidental from the rest as not coming under the definition and tried to subordinate the others to the definition, which made his treatment more indistinct.

But even if some one method were found, Aristotle says, this way

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of doing it would be ‘utterly indistinct and hard to use’. For in this case he who wishes to prove something other than the definition,<sup>445</sup> will have to do so through those things alone which can also contribute towards establishing the definition; e.g. he who proves one thing to be an accidental of another will have to show that it holds of it, but not that things which hold of another thing in this way, without being part of the definition, may or may not hold of it; and similarly with the other <predicables>. This makes argumentative attack about each one<sup>446</sup> hard to use and straitened, and further it takes away the things that are most peculiar to each<sup>447</sup> and by which each one of them differs from the others, since these things<sup>448</sup> cannot all be said to be definitional.

Or it might be claimed that all things are indeed contained in the definitions, both those which serve to refute and those which serve to establish each of these <predicables>,<sup>449</sup> but that they are not all in the same situation: some things which serve to refute the claim of one thing to be an accidental of another also serve to refute its claim to be its definition, such as not holding of this thing, but with others it is the other way round: they serve to refute one thing’s being an accidental of another, but can be used to establish it as its definition. For what holds of a thing, but not in such a way that it may or may not hold of it, proves itself not to be an accidental, but is useful for establishing the definition, since the things mentioned in the definition of any thing must not hold of it in the way of what may or may not hold of it.

Similarly he who refutes the claim of one thing to be the genus of another on the ground that it is not predicated of it in the what-it-is, also refutes the claim of this thing<sup>450</sup> to be the definition of the other; but he who refutes its claim to be the genus on the ground that, while being predicated in the what-it-is, it does not have a larger extension than the other thing, thereby establishes its being the definition of this other thing. For these are the very things that establish the definition: with definitions it has to be shown, among other things, that they do not have a larger extension than the thing defined. Also he who refutes (one thing being) the distinctive property (of another) on the ground that, while having the same extension, it signifies the what-it-was-to-be (for that thing), uses for his denial of (its being) a distinctive property just those things which will at once establish (it as) the definition.

Just as what serves to refute these other <predicables> serves to establish the definition, in the same way some things that disprove the definition are useful for establishing these other <predicables>. Thus he who denies the claim of one thing to be the definition of another on the ground that it may or may not hold of it, thereby establishes its being an accidental of it. Similarly he who denies the

claim of one thing to be the definition of another on the ground that, while predicated of it in the what-it-is, it has a larger extension than it, will establish it as the genus of the thing; he who disproves the claim of one thing to be the definition of another on the ground that, while having the same extension, it does not signify the what-it-was-to-be for that thing, in disproving the (proposed) definition establishes the distinctive property;<sup>451</sup> and he who establishes that the account offered signifies the what-it-was-to-be for that thing and is therefore its definition, disproves each of the others.<sup>452</sup>

Anyone who tries in this way to bring <the predicables> all under one single method will embark upon an indistinct treatment that is hard to use. For by Aristotle's earlier claim<sup>453</sup> it was impossible to find, but by the present one the method would, as we have explained, be unclear and hard to use even if it could be found. But if a method is given for each one in particular of the four kinds<sup>454</sup> here set out, proceeding from the things peculiar to each of them, distinguished and defined along clear-cut lines, this will be easier and clearer: it is more convenient and clearer to speak of the accidental in particular through the means by which it can be established or disproved, than to say, as if one were attacking by argument levelled at the definition, 'of all the things said about the definition, these ones also serve to establish the accidental, and these to disprove it', and so with the other <predicables>.<sup>455</sup>

This is why Aristotle says 'we must, as was said before, make a general division into the four kinds<sup>456</sup> mentioned earlier' – for his 'in outline'<sup>457</sup> brings out its being general – 'and then attach to and bring under each of these those of the others which are most appropriate to each:<sup>458</sup> under definition the substitution of clearer names for less clear ones<sup>459</sup> and the inquiry into sameness,<sup>460</sup> under genus the ones<sup>461</sup> based on differences, under distinctive property things which are a distinctive property at some time and in some relation, under accidental problems involving comparison.'

### <1.7 Sameness>

**103a6** First of all we should determine in how many ways 'the same' is said. (103a6-7)

After dividing the kinds in which problems and propositions are classified, Aristotle is going to show<sup>462</sup> that these are the only kinds of problems, and after that what things these kinds of problems consist in, and all the things useful to the issues before us that he adds in the sequel. First of all he says we must determine 'in how many ways "the same"<sup>463</sup> is said'. For since the dividing<sup>464</sup> of sameness is generally useful for many things pertaining to dialectic, and he has

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particularly mentioned<sup>465</sup> that there are certain problems involving an inquiry into sameness (which he said had to be brought under the problems of definition), and since one cannot investigate at all whether one thing is the same as another or different without knowing the division of sameness, therefore it is with good reason that, just as he has defined the kinds of the problems in the interest of greater clarity of the problems belonging to these kinds, so he also gives the division of sameness so that we may the better know the problems about sameness. For one cannot argue dialectically about sameness without knowing in how many ways 'the same' is used.

58,1      **103a7** 'The same' would seem, in outline, to divide into three: [for we are used to calling things the same either numerically or in species or in genus. The same numerically <we call> things which have more than one name although the thing itself is one, such as coat and cloak. The same in species, things of which there are more than one but not differing as to their species, as one human compared to another and a horse to a horse: for 'the same in species' are called all such things as come under the same species. And similarly also the same in genus all those which come under the genus, such as horse with human being.] (103a7-14)

Aristotle uses the phrase 'in outline' to mean 'speaking more generally and universally'.<sup>466</sup> Elsewhere<sup>467</sup> he sometimes adds to the three ways of sameness<sup>468</sup> by which he now explains it a fourth one, that by analogy, which is more remote from the ones here mentioned.<sup>469</sup> The ways into which he now divides sameness are the three which he usually has: for a thing is called 'the same' numerically, in species or in genus.

5            Numerically the same as one another are those things which have more than one name, while the thing signified by these names is one. They are said to be many-named; thus 'mantle' and 'cloak' are numerically one, because what they denote is the same thing, one in number. When an account and a name signify the same thing, this is one in number; and if several accounts signify the same thing these too are numerically the same, for with these names or accounts, to be numerically the same amounts to signifying the same things.

10           Those things are the same in species which are more than one in number but not different as to species, i.e. which come under one and the same species, as Socrates and Plato, who are the same in species, and the horses Xanthus and Podargus.

15           Things are the same in genus when their genus is the same. This is the respect in which man is the same as horse: their genus is the same, living being. Things which are the same in species are invari-

ably also the same in genus, but all things that are the same in genus are not thereby the same in species: Socrates, being the same as Plato in species – the species human being – is also the same as him in genus: man is also living being. On the other hand man and horse are the same in genus, since they are living beings, but different in species, horse being one species, human another.

What Aristotle elsewhere<sup>470</sup> calls the same as one another by analogy are things which differ in genus, but show similarity in a proportion. This is why this way of being the same is more remote from those mentioned here.<sup>471</sup> The same by analogy are heart, source and unit, because unit is to number as the source is to a river and the heart to a living being: they are all starting-points<sup>472</sup> of the things they are in. Again, sight and understanding are the same by analogy, for understanding counts for<sup>473</sup> the same in the soul as sight does in the eye. In the same way calmness of the sea is the same as stillness of wind: the one is in the sea what the other is in the air, both of them being a quiet.

[103a14 It might be held that water from the same spring, which is called the same, has a difference besides the ways mentioned. Nevertheless let this kind of thing too be placed in the same (class) with the things named after one species in one way or another: for it seems that all such cases are akin to and nearly the same as each other. For all water is said to be the same in species as all other water because it has some similarity, and that from the same spring is in no way different except that this similarity is stronger, which is why we do not separate it from the things named after one species in one way or another.] (103a14-23)

Having given the division of sameness, Aristotle inquires whether water from the same spring, which is ever different taken as to number – whether this either is the same in some one of the ways<sup>474</sup> mentioned above, or this is another way of being the same besides the three stated.<sup>475</sup>

For they<sup>476</sup> are not the same in number, since they are separated from each other. Nor again would they be held to be the same without qualification in species: for water from different springs is the same in species too, and so is water from a river and a source and a pool. In general all water is of the same species,<sup>477</sup> above all if it is also of the same quality, e.g. fresh water.<sup>478</sup> Yet water from the same spring is held to have something more than similarity in species, and to be in between sameness in number and in species.

However, Aristotle says that those things too which are the same in this way are the same in species: for what holds of them is nothing

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but sameness in species heightened and more intense, just as it is with twins: Castor and Pollux too are the same in species alone; the similarity in species between them surpasses that between other persons, yet the heightening of the similarity has not made them one in number.

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When Aristotle says of the water 'because it has some similarity' he means 'because it is water by the same account of water'. For this is the nature of things of the same species.

**103a23** It seems that what is numerically one is most unanimously called the same by all. [But this too is customarily given in more than one way: most strictly and primarily when the same is given by means of a name or a definition, as with coat for cloak and with terrestrial biped living being for human being. Secondly when it is given by means of the distinctive property, as with receptive to knowledge for human being and with carried upwards by nature for fire. Thirdly when <it is given> on the basis of the accidental, such as sitting or musical for Socrates: for all of these purport to signify what is one in number. And one may come to see that what has just been said is true best of all by observing people who change one appellation for another: for often when we tell someone to call the person who is sitting and in doing so use that person's name, and when it then turns out that the person to whom we gave the order did not understand who was meant, we change the appellation, assuming that he will understand it better on the basis of the accidental, and we tell him to summon the person sitting, or talking, to us, obviously on the supposition that we signify the same by the name and by the accidental. (103b1) Let the same, then, be divided into three as has been said.] (103a23-b2)

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After showing how sameness is divided, Aristotle says<sup>479</sup> that what is most of all conceded by all persons to be the same are things which are numerically one. For to things that are the same in species or genus, sameness is not assigned straightforwardly; an argument is needed before a person concedes that such things are the same: they would not concede that Socrates is the same without qualification as Plato, since they are plainly seen to be different from each other, and even less that man is the same without qualification as horse. By contrast what is numerically one is agreed by all to be the same.

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But this 'one in number' too, Aristotle says, is used in more than one way, 'most strictly and primarily' when a name is replaced either by another name signifying the same (for here too the substitution is of what is numerically the same) or by a definition: for these things, which denote what is the same in number, are therefore themselves

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called the same in number as each another, since what is the same in number is of course not the names by themselves, but what is signified by the name and by the definition – probably,<sup>480</sup> for he who shows that one thing<sup>481</sup> is not the same as another shows that it is not its definition either.

It is true, Aristotle goes on, that the distinctive property too designates the numerically same thing as the name, but since the definition is more decisive and as it were primary, it is plausible that he has arranged the problems about sameness under definition, not distinctive property. For the definition brings out the thing to a greater extent and more clearly even than the proper name, but the distinctive property does not: this is why name and distinctive property possess sameness only secondarily.

For the name and the distinctive property of the thing named are the same in number in a secondary way: 'living being capable of laughter' is numerically the same as man, because what is meant by both of them is one in number.

Nor need we wonder that Aristotle calls man one in number: for both the species itself compared to itself and the genus considered in the same way are held to be one in number. For if the species were not the same numerically, then it would be the same in species; but things that are the same in species are more than one in number, e.g. Socrates and Plato; so the species itself will then be separated from itself. And since things of the same species are separated by their<sup>482</sup> matter, their common species will, inasmuch as it is common, be in this and that part of matter; but what is in matter is individual; so the common species too will then be an individual.

With the genus not only will this occur again, but the genus will moreover itself be different from itself in species, given that things which are the same only in genus are different in species. Now if either the species or the genus were itself by itself,<sup>483</sup> we would still have a claim which made sense; but if both of them reside in other things, then they will be the same as each other in just the way that the things in which man resides as their species, or living being as their genus, are the same as each other.<sup>484</sup> For just as men are the same as each other,<sup>485</sup> so too man himself is the same as himself as genus and as species: for in these does he have his being.

It might be said, then, that both definition and distinctive property signify what is numerically one, not because the species or genus which the definition or distinctive property belongs to is numerically one, but because for any thing that is numerically one among those that come under the genus or the species, both of them are true under the same conditions, not each of a different thing.

Thirdly, Aristotle says, being one in number is expressed 'on the basis of the accidental'. For when it has been obtained that a thing is

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an accidental of another thing, and the first, by holding at this time of this other thing alone, becomes a distinctive property of it, then this accidental becomes numerically one with the name of the thing, because it signifies what is one and numerically the same with it.<sup>486</sup>

That the accidental may sometimes occupy the place of a distinctive

10 property he has said before<sup>487</sup> and now says again, through showing that we often use the accidental as signifying the same thing as the proper name, e.g. when we give the order to ‘call the man who is seated’, if the person who receives the order does not know the name of this man.

‘Other (than)’ may be said in just as many ways as ‘the same’ is: either numerically, as Socrates is other than Plato, or in species, as

15 man is other than horse, or in genus, as living being is other than knowledge. But with things which are the same and things which are other, one thing follows from another the other way round. With

sameness, things numerically the same must necessarily be the same as each other in the other ways of sameness as well, since what is numerically the same is the same in both species and genus – it surely will not be other than itself<sup>488</sup> in species or in genus. On the other

20 hand things which are the same in species need not be the same numerically, but must be the same in genus; and things which are the same in genus need not be the same either in species or numerically. With things other-than, those which are different in genus must necessarily differ both in species and numerically, but those different in species need not differ in genus, though they must differ numerically; and things numerically different<sup>489</sup> need not be different either in species or in genus.

### <1.8 The list of predicables is exhaustive>

25 **103b1** [Let the same, then, be divided into three as has been said.] Now as to the fact that arguments<sup>490</sup> are from,<sup>491</sup> through, and for the things mentioned before, [one ground for believing this is through induction: for if one inspected each of the propositions and of the problems, it would be seen to be based either on definition or on distinctive property or on genus or on accidental.

Another ground for believing this is through syllogism: for it is necessary that everything that is predicated of a thing either is or is not counter-predicated of this thing; and if it is counter-predicated, it may be either definition or distinctive property: definition if it signifies the what-it-was-to-be <that thing>, distinctive property if it does not – for that is what a distinctive property was, that which is counter-predicated <of its subject>

but does not signify the what-it-was-to-be <this subject>. On the other hand if it is not counter-predicated of the thing, it either is or is not among the things mentioned in the definition of the subject; and if it is, then it may be either genus or difference, seeing that the definition consists of genus and differences; if it is not among the things mentioned in the definition, it obviously has to be an accidental, for the accidental was said to be that which holds of the thing yet is neither definition nor genus nor distinctive property.] (103b1-19)

Having said above that there are four kinds in which both the problems and the propositions come: definition, distinctive property, genus and accidental, and having shown what each of these is and how problems and propositions are based on them, Aristotle now shows that there cannot be more kinds of problems and propositions, but that arguments and syllogisms are always from and about these four. And after saying ‘arguments are from’ these, he brings out in what way they do so by adding ‘and through and for these’. By ‘through these’ he refers to propositions, by ‘for these’ to problems: that the arguments consist of the four kinds mentioned is because the problems they are about and the propositions they are from come in these four kinds.

Aristotle proves this through both induction and syllogism, which are the only grounds for belief<sup>492</sup> in the strict sense in arguments. For the example is a ground for belief but is classed with induction – it is said to be a rhetorical induction – and the enthymeme is also a ground for belief but is classed with the syllogism – this is said to be a rhetorical syllogism. From both of these has been taken away the completeness and perfection of being without qualification that which its nature rests upon, because of their being a condensation and reduction, as is plain from what Aristotle says of them elsewhere.<sup>493</sup>

What a syllogism is Aristotle has said.<sup>494</sup> Of induction he will speak a little further on, seeing that proof through induction is also appropriate for dialecticians: for it has the quality of being persuasive, which is what a dialectician aims at most.

That these are the only kinds of problems could be shown through induction by examining every single problem and proposition and inquiring on which kind it is based: for they would never be found in any other kind<sup>495</sup> besides those mentioned before. For problems like ‘Whether time is motion of heaven or not?’ are definitional: the inquiry is as to whether the account offered is the definition of time; the problem ‘Whether the good is in the category of substance or not?’ is a problem of genus, for what is investigated is whether or not substance is the genus of the good; and in the problem ‘Whether a natural upward motion belongs to fire alone or not’ the inquiry is

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about a distinctive property, but in 'Whether fire moves upward or not' it is about an accidental, for what is investigated is just whether moving upward holds of it. In similar ways to these one can take every problem and show that it comes under one of these kinds. And so, just like the problems, do the propositions, since as Aristotle said<sup>496</sup> the difference between these is only in the manner of their expression.

This is how it is shown by induction that there are only the four kinds of problems mentioned before. But one might further inquire under which kind of problems will be brought such problems as these: 'Why does the stone called magnet attract iron?' and 'What is the nature of prophetic waters?' for these do not seem to come under any of the kinds laid down. Actually these are not even dialectical problems, and these are the subject of the present account and divisions.

For the dialectical problems are equal in number and the same as the dialectical propositions, and these were contradictory pairs in question form;<sup>497</sup> it is between problems and propositions of this kind that the difference is one of manner. Now just as 'What is man?' is not a dialectical question, so 'What is the nature of prophetic waters?' is not a dialectical problem. Since things said in the form of 'Why is this so?' or 'What is this?' are not propositions to begin with, they cannot be dialectical problems: what is raised in this way are problems of physical science, as Aristotle says in his *On Problems*<sup>498</sup> as well; for things of a physical nature whose causes are unknown are problems of physics. It is true that there are dialectical problems about questions of physical science, just as there are about questions of ethics or logic, but those of the type we discussed earlier are dialectical,<sup>499</sup> those of the type now under discussion scientific. All dialectical problems, then, may be reduced to the investigation of the topics 'that a thing is so' and 'whether it is so', which are two of the four topics that Aristotle mentions at the beginning of *Posterior Analytics*, Book Two; for 'Why it is so' and 'What a thing is'<sup>500</sup> are not dialectical problems.<sup>501</sup>

We have already shown that there are this number of kinds of problems by a syllogism following Aristotle's tenets. The syllogism he himself uses is this. Given that in every problem and proposition one thing is predicated of another, and that the differences<sup>502</sup> and species of problems and propositions are based on the things which are predicated (the same might be said of hypothetical propositions, for in these too it is possible to obtain one of these <predicables> as the consequent, which takes the place of a predicate),<sup>503</sup> because everything that is predicated of another thing either does not or does have the same extension as this (when it does, the two are counter-predicated of each other), where what is counter-predicated is either definition or distinctive property, and what is not counter-predicated either is or is not in the essence and the definition of the thing,<sup>504</sup> and

if it is in the definition it will be genus or difference, but if not, accidental, since the accidental was that which being ‘neither definition nor distinctive property nor genus’ yet holds of the thing – given all of this we could have a categorical syllogism in the first figure based on disjunction as follows:

Everything that is predicated of another thing has or has not the same extension as this thing

Everything that is predicated of another thing, whether or not with the same extension, is predicated of this thing either as definition, distinctive property, genus or accidental

Therefore everything that is predicated, is predicated either as definition, distinctive property, genus or accidental.

By this conclusion it has been obtained that in every problem what is predicated is either definition, distinctive property, genus or accidental. But it seems that, in positing the second premiss with the appropriate argument to establish it, Aristotle has said something more; it can also be analysed as a composite argument, the last argument being

Everything that is predicated of another thing is either counter-predicated or just predicated of this thing

Everything that is counter-predicated or just predicated<sup>505</sup> is, to that of which it is predicated, either definition, distinctive property, genus, difference or accidental

Therefore everything that is predicated of something, is either definition, distinctive property, genus, difference or accidental.

The second premiss of this argument he establishes by means of two syllogisms. The one is

Everything counter-predicated of another thing either does or does not signify the what-it-was-to-be of this other thing

This thing which is counter-predicated is either the definition or a distinctive property of the other thing

Therefore everything that is counter-predicated of its subject is either its definition or a distinctive property of it.

The other is

Everything that is predicated without qualification<sup>506</sup> of its subject and does not have the same extension as it, either ‘is among the things stated in the definition of the subject’, or among the things predicated without qualification

‘If it is among the things stated in the definition of the subject, it will be either genus or difference; if it is not among the things mentioned in the definition, it will be an accidental’

Therefore everything that is predicated without qualification of a thing will be either its genus, or its difference, or an accidental of it. The conclusions of the syllogisms put together produce the second premise of the earlier syllogism,<sup>507</sup>

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65,1 Everything that is either counter-predicated or predicated without qualification of another thing, is either the definition, distinctive property, genus, difference or an accidental of this thing.  
And the same argument<sup>508</sup> applies to the proposition<sup>509</sup> as well.

### <1.9 Predicables and categories>

5 **103b20** After these we must determine the kinds of categories<sup>510</sup> in which the said four belong.<sup>511</sup> [These are ten in number: what-it-is, how much of, what kind of, in relation to, where, when, being situated, being disposed, acting, being acted upon. For accidental, genus, distinctive property and definition are invariably within one of these categories, for all propositions (made) through these (four predicables) signify either what-it-is or what kind of or how much of or one of the other categories. It is plain from the facts that the person who signifies the what-it-is signifies now substance, now what kind of, now one of the other categories.] (103b20-9)

10 Aristotle has now shown that the problems and propositions are in the four genera mentioned before.<sup>512</sup> Since these while being genera are not highest genera but are themselves again in others – they are among the things that are, of which there are ten highest genera, which it is customary to call by a particular name of their own, ‘categories’ – he says we must, following upon what has been said, define and set out the kinds of categories in which the said four differences<sup>513</sup> of problems and propositions belong. The phrase ‘in which the said four belong’ is elliptic; he has omitted ‘differences of problems and propositions’.

15 These are ten in number’, he says, referring to the kinds of categories, of which he speaks in his *On the Ten Categories*,<sup>514</sup> but he explains them here as well. Thereby he at once indicates the usefulness of that book for dialectic.<sup>515</sup>

Instead of ‘substance’ Aristotle adopts the phrase ‘what-it-is’: for substance is what is in the strict sense, and the ‘what it is’ and the definition are strictly of substance, even if ‘what it is’ is used in more than one way.<sup>516</sup>

20 Aristotle presents as indicating that the kinds mentioned before of problems and propositions are within the ten categories, that accidental, genus, distinctive property and definition all signify one of these:<sup>517</sup> for all propositions formed through these kinds (for that<sup>518</sup> is the full wording) have as the thing predicated either substance or quality or one of the other categories. For every definition is of some thing which invariably is either substance or ‘how much of, what kind

of, in relation to something, where, when, being situated, being disposed, acting, or being acted upon'.

Now the definition and the definitional problem may be found in all the categories, since it is possible to define things coming under each category. Similarly with genera and problems of genus: both genus and difference can be obtained in each category, for in the same categories in which are obtained the genera (of the things)<sup>519</sup> which the argument is about are also found the differences of those genera, as we have said elsewhere.<sup>520</sup> This is also why these, being differences in substance, will be substances themselves, and the problems arising from differences too will be in the category of substance. <There will therefore be><sup>521</sup> definitional problems in the category of substance, in that of quality or of quantity, and so with the other categories; and again problems based on genus in substance or based on genus in the what kind of, and so for the other categories.

The same account applies to the propositions. For just as from the term that is predicated in the problem or proposition it is recognized what kind<sup>522</sup> these<sup>523</sup> are (if what is predicated is a definition it is definitional, if a genus is predicated the problem is based on genus, and so with the others), just so is it recognized from what is predicated, in which category the problem belongs: if what is predicated is the substance, the problem is one in the category of substance, if a quality is predicated the problem is in the category of quality, and so with the others.

With things predicated in the category of what a thing is, their subject is of the same kind of category, so that the category and kind<sup>524</sup> in which the problem belongs will be recognized just as much by the subject as by the thing predicated. But in those problems in which one thing is predicated of another<sup>525</sup> (i.e. in which the predication is of an accidental), the kind is also<sup>526</sup> taken from the thing that is predicated. Since obviously no substance is an accidental of any other substance – for there cannot be a substance of an accidental<sup>527</sup> – it will be possible to take<sup>528</sup> the problems based on accidental in the other kinds (of categories), but in no way in (that of) substance.

As to distinctive property, if it is possible for properties of substances to be substances, in the same way as with the other categories, then there will be problems based on distinctive property both in the category of substance and in all the other kinds;<sup>529</sup> but if every distinctive property is an accidental, because a distinctive property is a type of accidental, then the problems based on distinctive property cannot be in the category of substance either, but will be in that genus to which the distinctive property belongs.<sup>530</sup>

By his claim 'For all the propositions formed through these kinds<sup>531</sup> either signify what the thing is', i.e. either predicate something of a thing in the category of substance, or in the category of what kind of,

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25 or signify one of the things in the other categories,<sup>532</sup> Aristotle shows that the four kinds of problems mentioned before are in the ten kinds of categories and do not fall outside these, even if they cannot all be in all of them because problems based on accidental cannot be in the category of substance.

30 The kind of the problems and propositions must necessarily be in the same category in which the thing signified by the problem or proposition is found. Aristotle shows this by induction as well: for he who<sup>533</sup> signifies the what-it-is, i.e. predicates this of a thing, signifies either of a substance what it is, or of a quality, or quantity, or of something in one of the other categories; for 'what a thing is' is said in many ways.

67,1      **103b29** For if, when 'man' is set out,<sup>534</sup> one<sup>535</sup> says that what is explained is man or living being, [he says what it is and signifies substance; but when 'white colour' is being explained and one says that it is white, or colour, he says what it is and signifies what kind of thing <a thing> is. Similarly if what is being explained is one-yard length and one says that it is of one yard, <or><sup>536</sup> length, he will say what it is and signify how much <a thing> is; and similarly for the other <categories>. For each of those instances in which either the thing is itself said of itself or a thing's genus is said of it, signifies what it is, but when one thing is said of another thing it does not signify what it is but how much or what kind or one of the other categories.

So what arguments concern and what they are from (104a1) are these things and nothing more. After this we have to say how we can obtain these and through what means we may get a supply of them.] (103b29-104a2)

5      That the what-it-is is given in each category, and that what is predicated in the what-it-is can be obtained for each category, this Aristotle as I have said<sup>537</sup> shows by induction. For each of the things under each category, whether the thing is itself said of itself,<sup>538</sup> as e.g. that the man is man or the white is white, and so with the other categories,<sup>539</sup> <or whether> it gives the genus appropriate to it, 'signifies what (the thing) is'. Similarly when someone gives the definition of each thing, he too states the what-this-thing-is: for it is equivalent to pronounce the man man or two-footed terrestrial living being, for in both phrases it is itself said of itself, and both have the same extension,<sup>540</sup> which is why the answerer has taken<sup>541</sup> the name in place of the definition. But when the thing predicated is not of the same genus as the subject but is said of another thing (for this is the sense of 'but when one thing is said of another thing'<sup>542</sup>), then the genus of the problem will be from the same category as the thing predicated. It<sup>543</sup> then no longer signifies the subject's what-it-is, for a

thing from one category is not predicated of a thing in another category in the category of what it is; one thing is stated of another in those<sup>544</sup> in which the thing predicated is an accidental. That is why it is impossible, as I said,<sup>545</sup> to say there are some problems based on accidental in the category of a substance:<sup>546</sup> because no substance is accidental to another substance. However, while it is not possible for one substance to be accidental to another, still a person may inquire whether some substance is accidental to another substance, or to an accidental, as it is done in the propositions against nature.<sup>547</sup> But if that is so, then problems based on accidental too can be in the category of substance.

If the problems and the kinds of problems are in the categories, then it is obvious that the study of the categories is useful for dialectic, given that it is useful to know in what genus of the things-which-are-there the problem before one belongs.

After mentioning the four kinds in which propositions and problems fall, and also the categories in which the four kinds of problems and propositions fall, Aristotle goes on to say ‘what arguments concern and what they are from, are these things and nothing more’,<sup>548</sup> referring to the problems and propositions: ‘these’ and ‘this number’ in genus, obviously. But his purpose was to inquire into the number and kinds of things dialectical arguments concern and what they are from, and how we shall be supplied with these arguments,<sup>549</sup> for this is what the method resides in. Having, then, spoken about the first of these things, Aristotle says that after these we must say how and by what means we shall be supplied with dialectical arguments, which is the remainder of what he proposed.

### <1.10 The dialectical proposition>

**104a3** Let us first, then, determine what is a dialectical proposition and what a dialectical problem. [For we must not set down every proposition, nor every problem, as dialectical: for no intelligent person would propound what is held by no one, or would raise as a problem what is clear to all; for the latter does not contain a puzzle and the former no one would lay down by an affirmative.] (104a3-8)

In order to show<sup>550</sup> how we may be supplied with dialectical propositions (for a supply of propositions contributes to the supply of dialectical arguments, about which it is his purpose to speak, as he will say: for it is one of the four instruments he will mention), Aristotle, having said this about propositions and problems more generally, says we should first define ‘what is a dialectical proposition and what a dialectical problem’, in order that it may be known what kind of

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propositions we have to be supplied with and what kind of problems we have to inquire into: for it should first be defined and known what are the things for the supply of which we have to seek a method. Neither every proposition nor every problem is dialectical;<sup>551</sup> for

15 neither would any ‘intelligent person’ propound and ask in the form of a proposition ‘what is held by no one’, e.g. ‘Is it the case that one ought to harass one’s parents?’, or ‘— to profane the gods?’ For the dialectician propounds what he wants to obtain, and no one concedes things like these. Nor would he raise as a problem ‘what is clear to all’ and not in need of proof, e.g., given that it is day, whether it is day or not? For the latter, as being known to all, obviously do not involve  
 20 a puzzle, and so are not even problems, whereas proofs and inquiries are about things that we have a puzzle about or do not know; and the former – obviously, opinions held by no one – ‘no one would lay down by an affirmative’ and concede, and so they are not even propositions.

One may ask how, after saying that problems and propositions are equal in number and the same, and that the difference between them is in the manner of their expression alone, Aristotle can now say that  
 25 the dialectical problem and proposition are somehow each other’s contrary, since the one is the object of a puzzle and the other is something known. In fact he does not say that the dialectical problems are equal in number to and the same as the dialectical propositions, but in general calls equal and the same in number the problems and propositions in a contradictory pair in question form,<sup>552</sup> which include the dialectical problems and propositions between which he now states the difference: for both what is well-known and approved, such as the dialectical proposition purports to be, and what is an object of controversy and puzzlement, such as Aristotle says the dialectical problem has to be, are propounded in the form of a contradictory pair  
 69,1 as well as raised as problems, and of these the approved items are propositions, the subjects of inquiry are problems.<sup>553</sup>

Aristotle mentions the difference in the manner (of expression) of these, that between ‘Is it the case that’ and ‘Whether’, in order to indicate the similarity between the wording of these two and how<sup>554</sup> each of these items is both propounded as a proposition and raised as a problem. For every proposition becomes a problem by changing its manner of expression in wording; nevertheless what is substituted for a proposition is not thereby a dialectical problem, unless it is subject to inquiry.<sup>555</sup>

**104a8** A dialectical proposition is a question<sup>556</sup> which is approved<sup>557</sup> [either by all or most or the knowledgeable, and among the latter either by all or most or the best-known, and which is not paradoxical.<sup>558</sup> For people will affirm what is held by the

knowledgeable, if it is not contrary to the opinions of the majority.] (104a8-12)

So neither is every proposition a question – only the dialectical proposition is – nor is every question a dialectical proposition: for there is more than one species of question. For not only propositions are asked but, as Eudemus specifies in his books *On Verbal Expression*, those who ask questions do so either about an accidental: for either they, having put something forward and marked it off, inquire about its accidental, as do those who ask what is the natural motion of fire, or what happened to Socrates; or, the other way round, they define the accidental and assume this in their question, demanding to find out what it is an accidental of, as does he who asks which animal has the colour white or black as an accidental,<sup>559</sup> which of all goods is to be chosen for its own sake, or who is the person seated. This is one species of question; another is about essence, when, having put something forward, we through the question examine what this thing is, as does he who asks what is man: for he who asks such a question demands to find out the essence of the thing, not an accidental of it. A third species of question is when someone puts the question about a proposition<sup>560</sup> and then as its answer requests the one part of the contradictory pair, e.g. ‘Isn’t it the case that the world is spherical?’ The dialectical proposition comes under the last named species of question. For not every question is a dialectical proposition, yet the dialectical proposition is a question. For of the propositions, as has been said,<sup>561</sup> some are demonstrative, such as the immediate and primary ones, some dialectical, i.e.<sup>562</sup> the approved ones, and some eristical: the scientific<sup>563</sup> ones do not when they are in question form thereby become dialectical – such a proposition as ‘Is it the case that form and matter are the elements of the things that are?’ is not dialectical – and the eristical proposition, e.g. ‘Is it or is it not the case that he who sees has eyes?’ does not do so either; dialectical propositions are, of the propositions in question form, the approved ones, as in ‘Is it the case that health is good or is it not?’, ‘Are the virtues of the soul to be chosen or are they not?’, ‘Is it possible for something to come into being out of what is not, or isn’t it?’ ‘For no intelligent person would propound what is held by no one’,<sup>564</sup> since it is the approved question that is a dialectical proposition.

After saying this, Aristotle reminds us again what are the ‘approved’ things by adding: for approved, as has been said, is ‘what is held to be so by all or most or the knowledgeable, and of these latter either all or most or the best-known and most approved’.<sup>565</sup>

But having said that the things held to be the case by the very well-known among the knowledgeable are approved, Aristotle, seeing that an opinion of a well-known knowledgeable person may conflict

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with the opinions of the many and that they do not concede such an opinion, adds ‘and not paradoxical’, by which he instructs us that we should treat the opinions of the knowledgeable as approved with respect to things on which the many do not have opinions, but where the opinion of the many conflicts with that of some knowledgeable person, there what the many believe is more approved. For that health is not a good is the opinion of some knowledgeable people, but no one would call it approved, since it conflicts with the notions of all. And so with Parmenides’ opinion that what is is motionless and one, or that of Heraclitus that contraries are the same, or that of Antisthenes that it is impossible to contradict a person. These are not propositions but theses, as Aristotle will call them further on.<sup>566</sup>

**104a12** And the things similar to the approved are dialectical propositions too, [and the contraries of things held to be approved if propounded in the negative, and all opinions which are in the arts that have been discovered. For if it is approved that the knowledge of contraries is the same, it will also appear to be approved that the sense-perception of contraries is the same. And if it is approved that grammar is numerically one, it will appear to be approved that flute-playing is one as well; on the other hand if it is approved that there is more than one art of grammar, it will also be approved that there is more than one art of flute-playing: for all of these seem to be similar and akin. And similarly the contraries of things approved if propounded in the negative will appear to be things approved. For if it is approved that we must benefit our friends, then it will also be approved that we must not harm them. The contrary is that we must harm our friends, which in the negative becomes that we must not harm them. Similarly, if we must benefit our friends, we must not benefit our enemies. This too is by negation of the contraries: for the contrary is that we must benefit our enemies. And just so for the others. And another thing that will in a comparison appear to be approved is the contrary of one thing said about the contrary of another, for instance if one must benefit his friends he must also harm his enemies. It may seem that benefiting one’s friends is also a contrary of harming his enemies; whether this is truly so or not will be stated in our discussion of contraries.<sup>567]</sup> (104a12-33)

After saying that the dialectical proposition is an approved question, Aristotle says that things similar to the approved are dialectical propositions too, thereby promising us some supply of dialectical propositions. ‘For if it is approved that the knowledge of contraries is the same, it will also appear to be approved that the sense-perception

of contraries is the same.' And that it is something approved that 'the knowledge of contraries is the same' is plain, for medicine is knowledge of what is healthy as well as what is sick, arithmetic of odd as well as even, music of what is in tune as well as out of tune, gymnastic of what contributes to good form as well as what does not, and so with the rest. And knowledge is in the same relation to the things known as sense-perception to the things perceived, for either of them serves to judge the things that come under itself. Their similarity is by analogy. Or<sup>568</sup> they are akin to each other in themselves too, given that sense-perception, like knowledge, comes under disposition, and in general under things in a relation to something. But we must not understand the examples in an over-precise manner of speaking, since it will be held to be more evident and more approved that the sense-perception of contraries is the same than that the knowledge of them is.

Again, if it is approved that 'grammar is numerically one', it would appear to be something approved that 'flute-playing is one' as well. And if it is approved that there is 'more than one art of grammar', it will also be approved that there is 'more than one art of flute-playing'. For it is a similar question, to which the same account pertains, whether any art whatever is one numerically or in species: questions like these are akin and come under the same genus. And just as the first example was similar by analogy, so the last one is similar in kind, which is why Aristotle called them 'akin'. And whether 'grammar is one' or more than one is a question as follows,<sup>569</sup> whether one says that the literacy of Aristarchus, and in general each individual literacy, is numerically one because its subject is numerically one, or whether one says it is one in species, because it is divided up together with the activities coming under it,<sup>570</sup> and these activities are more than one in number.

Approved, says Aristotle,<sup>571</sup> are also 'the contraries of things approved if propounded in the negative', i.e. the negations of the contraries of the approved. For since the contraries of things approved are paradoxical, therefore the negations of these paradoxes will be approved. For example if it is approved that 'We must benefit our friends', then the contrary of this, that we must harm our friends, will be disapproved; clearly the negation of this disapproved thing will itself also be approved, and this negation of it is that 'we must not harm our friends'.<sup>572</sup> Again, it is approved that we must benefit our friends; the – disapproved – contrary of this is that 'we must benefit our enemies', and the negation of this, that we must not benefit our enemies, will be something approved. As his first contrariety between propositions, Aristotle takes opposition as to the thing predicated in them: for benefiting is the contrary of harming, but the underlying<sup>573</sup> term 'friend' is the same for both. His second contrariety involves the

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5 same term, ‘benefiting’, as predicate, but underlying terms,<sup>574</sup> ‘friends’ and ‘enemies’, which are contraries.

‘Approved’, says Aristotle,<sup>575</sup> will ‘in a comparison’ be held to be ‘also the contrary of one thing’ said ‘about the contrary of another’. Here ‘in a comparison’ is ‘in juxtaposition’; for if ‘to benefit one’s friends’ is approved,<sup>576</sup> then the contrary, harming, said of<sup>577</sup> the opposite, enemies, will be approved as well [and benefiting is the contrary of harming].<sup>578</sup> By using in addition,<sup>579</sup> then, the fact that ‘benefiting one’s friends’ is approved, it can be shown that it is also approved that one should harm one’s enemies: if benefiting goes with the one, then harming goes with the other. Also if virtue benefits, then vice damages, which is why it is also held to be approved that ‘if vice is sufficient<sup>580</sup> for unhappiness, then virtue is for happiness’. For even if it is not by itself approved that one should harm one’s enemies, yet to juxtapose with it that one should benefit one’s friends makes it appear to be approved: that is the sense of ‘in a comparison’.

It should also be noted that Aristotle has called the first propositions, those about harming one’s friends and about benefiting one’s enemies, contrary to that about benefiting one’s friends, because one of the two terms in the propositions was contrary to a term in this other proposition,<sup>581</sup> but the proposition in which both terms are contrary to those in this other proposition he does not call contrary. This is why both are approved and why they are true at the same time,<sup>582</sup> whereas the contrary of the approved cannot be approved. To some people, Aristotle says, these too might appear to be contraries; but making it distinctly clear whether they are so or not he puts off to the account of contraries. This he gives in *Topics*, Book Two,<sup>583</sup> but he also refers to the subject at the end of *On Interpretation*, where he says that ‘It is false to think that contrary opinions are defined by being of contraries: the opinions that the good is good and that evil is evil are presumably one and the same, and they are true regardless of whether they are one or more than one. Yet they are contrary: not, however, by being (said) of contraries, but rather by being (said) in a contrary manner’.<sup>584</sup>

73,1 104a33 It is plain that all opinions which are in an art are also dialectical propositions: [for a person will affirm opinions held by those who have studied these matters, such as by the physician about medicine, by the geometrician about geometry, and so with other subjects.] (104a33-7)

5 It is plain, Aristotle says, that all opinions which have been found<sup>585</sup> in the arts by scientists and practitioners of these arts ‘are also dialectical propositions’, i.e. approved ones. He adds why this is plain: ‘for a person will affirm’ and concede ‘opinions held by those who have

studied these matters'. This would follow from what has been said before: the opinions of the knowledgeable were approved, and it is the practitioners who are knowledgeable concerning their particular field; so that the things found by these people would seem to be approved, since it is a common opinion<sup>586</sup> that in matters where we do not know we should trust those who do. This is why in matters of medicine the opinions of the physicians are approved and in questions of geometry those of the geometers; people will say to those who talk at random 'That is not what the physicians say' or 'what the geometers say'.

Aristotle is not saying that the discovery<sup>587</sup> by the rules of the science or art is itself<sup>588</sup> merely approved – it is demonstrative – but that the many will concede that which those who occupy themselves with a subject find to be the case, if it is plain that they do not conflict with the common notions; we have spoken of this before.<sup>589</sup> In fact there is not even any conflict between the many and the scientists about opinions pertaining to the various sciences and arts, because the many do not have opinions on these things to begin with. One can find many instances of this: the medical facts from Hippocrates' *Aphorisms*, e.g. 'Spontaneous fatigues are a sign of diseases' and 'Liquid foods are wholesome for patients with a fever'; or in geometry, that the three angles of the triangle are equal to two right angles, and that in every triangle two sides are greater than the third, in any permutation.

### <1.11 (1) The dialectical problem>

**104b1** A dialectical problem is a theorem<sup>590</sup> which bears either on choice and avoidance<sup>591</sup> or on discernment and truth, either by itself or as contributing to another such theorem, [about which either the many have no opinion either way, or they have one contrary to the knowledgeable, or the knowledgeable have one contrary to the many,<sup>592</sup> or about which contrary opinions are held within either party. For with some problems it is useful to know them only with a view to choosing or avoiding, such as whether pleasure is to be chosen or not, and with some it is useful only for knowing them, such as whether the world is eternal or not. And with some it is useful for neither of these, but they contribute to some such theorem: for there are many things we want to ascertain not in and by themselves but for the sake of other things, so that through them we will ascertain something else.] (104b1-12)

After saying that the dialectical proposition is an approved question, and in how many ways one can take the approved,<sup>593</sup> Aristotle duly

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74,1 speaks next of the dialectical problem, and says that the dialectical problem has to be a ‘theorem’. He says ‘theorem’ instead of ‘investigation’, for it is their<sup>594</sup> habit to call investigating ‘theorizing’. So what is being expressed says<sup>595</sup> ‘an investigation about a theorem bearing “either on choice and avoidance or on discernment and truth”, either  
 5 by itself or as contributing to investigating “another such theorem”.’ For that<sup>596</sup> ‘about which either the many have no opinion either way, or they have one contrary to the knowledgeable, or the knowledgeable have one contrary to the many,<sup>597</sup> or about which contrary opinions are held within either party’,<sup>598</sup> which is what he says a dialectical problem is, indicates the type of investigation. A theorem thus would  
 10 seem to be an account which gives the cause of our discernment of one of the things mentioned before,<sup>599</sup> named a theorem for its giving the cause of our theoretical insight<sup>600</sup> and discernment. And so every dialectical problem will be either an ethical or a scientific or a logical theorem (for these are indicated by what was said before<sup>601</sup>); however, not every ethical, scientific or logical theorem is at once a dialectical problem,<sup>602</sup> but only those which contain some one of the distinguishing marks added: and these are<sup>603</sup> ‘about which either they<sup>604</sup> have no opinion either way, or the knowledgeable have one contrary to the many, or the many have one contrary to the knowledgeable, or about  
 15 which contrary opinions are held within either party’.

All those things investigated which have reference to choice or avoidance are ethical problems. For the inquiry into good and evil, and what is to be chosen and what to be avoided, is ethical and has  
 20 reference to choice and avoidance, not to bare discernment: he who inquires whether pleasure is good or not, or in general about any good that can be acquired,<sup>605</sup> inquires about choosing and avoiding them. He who inquires whether the world is spherical or not, or the soul immortal or not, or any other among the things that come to be and are by nature, makes his goal the discernment the truth, which is a  
 25 distinctive property of theoretical science:<sup>606</sup> for discernment of the truth in the noblest subjects is the goal of theory. And logical problems are all those things which are neither investigated as possible actions nor have as their goal the discernment of the truth contained in them, but are investigated as contributing either to the discernment of what is to be chosen and what is not, or to the finding what is true and what is false. The study of logic has within philosophy the place of an  
 30 instrument.<sup>607</sup> investigations in the former are undertaken for their usefulness towards the latter. Thus he who investigates e.g. conversion, or the syllogistic or non-syllogistic pair,<sup>608</sup> investigates these as contributing and aiding towards finding the things mentioned before.<sup>609</sup> Aristotle here too states clearly that the study of logic is an instrument, when he says it is worth investigating because it contributes towards finding the things mentioned first.

After saying what questions the dialectical problem is involved with,<sup>610</sup> Aristotle next adds the specifications which he has mentioned before, through which he separates the problem from theorems which concern these matters, yet are not dialectical problems. That he has not added these specifications to the proposition<sup>611</sup> is not because the dialectical proposition does not concern the same matters that he says the problem is concerned with: both concern the same matters, but with propositions what matters they concern and revolve around is something known from their very nature.<sup>612</sup> for the things which are approved and those that appeal to the many concern the very things of which they, thanks to their approved character, bring out these other things as well.<sup>613</sup> Propositions too concern these matters; however, they are not investigations. Moreover, as much as propositions may concern these matters (for everything that is approved is about one of these), still the essential nature of dialectical propositions is not based on the fact that they are about one of these things, but on their approved character: that is why Aristotle uses this for defining them. But since problems are problems because they deserve to be investigated, and no other things deserve to be investigated besides those contributing towards ‘either choice and avoidance or discernment and truth’ and those aiding towards these, it was plausible for him to use these features when he came to define the problem. The specifications added to the problem<sup>614</sup> clearly separate the proposition from it.

After saying that a problem is a theorem and an investigation, and that this is its genus, Aristotle duly adds the differences which turn a theorem and investigation about such matters into a problem, since not every theorem and investigation is at once a dialectical problem. He says a dialectical problem is a theorem in those matters ‘about which they either have no opinion either way, or the many have one contrary to the knowledgeable, or the knowledgeable have one contrary to the many, or about which contrary opinions are held within either party’. The many have no opinion either way about those matters in which they do not come down<sup>615</sup> on either side of the contradiction;<sup>616</sup> for instance among ethical problems, whether the virtues follow from one another,<sup>617</sup> or whether or not they are to be chosen for their own sake, or whether they arise in the reasoning or the affective part of the soul; among scientific problems, whether or not the world is without end,<sup>618</sup> whether or not it is spherical, whether the soul is immortal; among logical problems, whether there are opposites in four ways,<sup>619</sup> whether syllogistic pairs<sup>620</sup> are formed according to three figures.

But it may also be that his ‘no (opinion) either way’ refers to all, not just the many: for there are things on which the knowledgeable do not come down on one side of the question either (e.g. whether the

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stars are even or odd in number): for this<sup>621</sup> is what he here uses the word ‘opinion’ to refer to. To this (class) belong many investigations in science, for which the grounds for belief are taken from probabilities, for it is the dialectician’s part in such questions to impart<sup>622</sup> through what is approved a momentum and inclination towards one of the opposed positions, e.g. that the world is eternal, or that it is

10 spherical. For a person may produce attack arguments dialectically, in favour of<sup>623</sup> the latter, that the completest (and most perfect)<sup>624</sup> shape is appropriate to the completest (and most perfect) of bodies; the completest (and most perfect) of bodies is the world, since it contains all the others within itself: therefore the completest (and most perfect) of shapes is appropriate to the world; the completest (and most perfect) of shapes is the sphere, since it admits neither adding to nor taking away from it:<sup>625</sup> therefore the spherical shape is  
 15 appropriate to the world. But about whether the stars are even- or odd-numbered too all people are undecided, and regarding this too the dialectician can produce attack argument from what is approved, by obtaining that what is best in the field of number is appropriate to the stars, since they are gods, and that what is best in the field of number is the even, therefore the even number is appropriate to the stars.

20 And ‘the knowledgeable have’ an opinion ‘contrary to the many’ about such questions as whether or not being well-advised is to be preferred to good fortune, and goods of the soul in general to goods of the body, and whether or not pleasure is the greatest of goods, or is a good at all. For the many think good fortune preferable to being well-advised, and health to virtue, but the knowledgeable think the opposite; and the many think pleasure is the greatest good,<sup>626</sup> but  
 25 among the knowledgeable some say that it is not the greatest good,<sup>627</sup> some that it is indifferent,<sup>628</sup> some that it is actually bad.<sup>629</sup>

And ‘contrary opinions are held within either party’: among the knowledgeable about fate, the immortality of the soul, infinity, about the void, and things like these; among the many where some of them claim health to be preferable to wealth but others the other way round, and some value strength above looks but others looks above strength, and all that sort of thing.<sup>630</sup>

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**104b12** Problems are both those things of which there are contrary syllogisms,<sup>631</sup> [for these involve a puzzle as to whether a thing is or is not so, because there are persuasive arguments about both;<sup>632</sup> and those on which, important as they are, we have no argument, since we think it difficult to give the reason why, such as whether the world is eternal or not: for this too is a kind of question one might inquire into. Let the problems

and the propositions, then, be determined as we have said.]  
 (104b12-19)

After saying that those problems are dialectical about which ‘either they have no opinion either way’ – the many, obviously, for questions in which these do not firmly and definitely<sup>633</sup> come down on either side are problems; yet it could also refer to the knowledgeable, as I have said<sup>634</sup> – ‘or the knowledgeable have an opinion contrary to the many, or contrary opinions are held within either party’, Aristotle adds to the (problems) mentioned also those ‘of which there are contrary syllogisms’. The reason why these are another (class) of problems he gives himself by adding ‘for these involve a puzzle as to whether a thing is or is not so, because there are persuasive arguments about both’.<sup>635</sup> For ‘Whether pleasure is good or not?’ would seem to be a dialectical problem because there is an approved syllogism about either part of the contradictory pair. That it is good is shown by such a syllogism as

What everything strives for is a good

Everything strives for pleasure

Therefore pleasure is a good.

That it is not a good is shown by such a one as

The good makes people good

Pleasure does not make people good

Therefore pleasure is not a good.

But someone might inquire whether this is not included among those<sup>636</sup> mentioned before: for the contrary syllogisms seem to be the ones<sup>637</sup> in which ‘the knowledgeable have an opinion contrary to the many’ or ‘contrary opinions are held within either party’. In fact the conflict there involves the bare<sup>638</sup> assent of either of the two conflicting parties<sup>639</sup> without syllogistic inference, whereas in the present case one suspends judgment because of the opposed arguments, not just because of their proponents. This is why in these cases too the matter which is investigated becomes a dialectical problem because there is no consensus yet.

Aristotle says those problems are dialectical ‘also on which we have no argument’ and syllogism<sup>640</sup> as to whether or not it is so,<sup>641</sup> ‘important as they are’, and worth discerning and, obviously, as yet unknown and having certain arguments in them<sup>642</sup> – for unimportant matters we spurn as not being worth investigating and discerning in the first place. Aristotle himself presents a clear example of something important, worth discerning and yet a subject of puzzles and inquiry for lack of a probative syllogism,<sup>643</sup> i.e. a demonstration of how it is with it:<sup>644</sup> ‘whether the world is eternal or not’: for why it is eternal is hard to know and worth investigating.<sup>645</sup>

Still, it may be that by the words ‘problems are (also) those things

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5 of which there are contrary syllogisms' Aristotle does not mean to add other species of problems, but refers to the ones mentioned before: then they are equivalent to 'both these and the former are problems'.<sup>646</sup> For 'contrary syllogisms' are those by<sup>647</sup> which 'either the knowledgeable have an opinion contrary to the many, or contrary opinions are held within either party'. And things 'on which we do not

10 have an argument, important as they are', could be the same as those about which they 'have no opinion either way', so that this would be a reminder of the correctness of what was said before, equivalent, as I said, to 'these too are problems'. Dialectical problems are among these because, with things on which the many have no opinion either way, there is no presumption in favour of either of the pair of contradictions as being more approved. For if there is, then precisely

15 due to there being such a presumption it becomes approved and a proposition rather than a problem,<sup>648</sup> and its opposite non-approved, for the opposite of what is approved is non-approved. And the same applies to the things on which the knowledgeable have an opinion contrary to the many, or contrary opinions are held within either party: here too neither of two contradictions is either approved

20 without qualification<sup>649</sup> or disapproved without qualification,<sup>650</sup> because the proponents of either part are more or less equal when it comes to their approval rate.<sup>651</sup>

### <1.11 (2) The thesis>

**104b18** [Let the problems and the propositions, then, be determined as we have said.] Now a *thesis* is a paradoxical supposition of one of those who are well-known in<sup>652</sup> philosophy, [such as that it is not possible to contradict, as Antisthenes said, or that everything is in motion, following Heraclitus, or that what is is one, as Melissus says – for it is silly to pay heed to assertions contrary to current opinions made by just anybody; or <things> on which, while they are contrary to the (current) opinions, we do have an argument,<sup>653</sup> such as that not all there is is either generated or eternal, as the sophists say: for to be literate while being musical is neither to be generated this way nor to be eternally so. For even though one does not hold this opinion, it is one that might be held because there is an argument for it.] (104b18-28)

After speaking of the dialectical problem, Aristotle next speaks of the thesis, since the problem is held to be a thesis too, and he shows what kind of problem is a thesis. For not every problem is a thesis: according to him a thesis is a 'supposition' against common opinions,<sup>654</sup> by one of those who are highly approved in philosophy:

'paradoxical' because it conflicts with common notions, and worth investigating because its proponent is well-known in philosophy. This is why one has to add the proponent of the opinion, the person who has originally constituted the thesis, to this kind of problem, as in 'Whether everything is continually flowing and always becoming and nothing ever stands still, as Heraclitus has it, or not?' and 'Whether what is, is one and motionless, as Parmenides thinks, or not?' and 'Whether there is movement or, as Zeno thinks, there is none?' and 'Whether health is a good or, as Chrysippus claims, it is not?'<sup>655</sup> and 'Whether it is possible to contradict or, as Antisthenes thinks, this is not possible?'.<sup>656</sup> For Antisthenes denied that there is contradicting: he said that those who speak of something must express,<sup>657</sup> and signify through what they express, that thing of which they are speaking, but those who contradict them have to speak of the same thing. From these initial assumptions he argued: persons who are held to contradict each other about something do so in one of the following ways. Either both of them express the account of the thing, or neither of them does, or the one does and the other does not. But if both of them expressed the account of the thing, they could never contradict each other, for they would express the same thing; if neither of them expressed the account of the thing, they would not be expressing anything of that thing to begin with, and persons who do not say something of the same thing cannot contradict each other about it either; and if one of them did and the other did not express it,<sup>658</sup> they could not contradict each other either, since a person who does not express the account of the thing does not express anything of it at all, but says something of that which he does signify through what he says, and in this way could not contradict the other about it either. And these things being so it would not be possible to contradict at all.

The false assumption that he makes is that the person or persons who do not express the account of a thing do not express anything at all of it: for it is not the case that people who say things which are not true do not speak of anything at all. One can speak of a thing precisely by expressing false things – if the person who expresses true things of a thing were the only one who speaks of that thing, there would be no such thing as false speech – given that everyone who expresses a falsehood of a thing is expressing a falsehood *in speaking of this thing*. And if it is possible to express falsehoods, then it should also be possible to contradict someone by expressing a falsehood, since in general to contradict is to express opposite things of the same thing, and it is not possible when two persons express opposite things of the same thing that both of them speak the truth. Aristotle, however, does not say one<sup>659</sup> should make use of their<sup>660</sup> syllogisms and arguments, but merely of their opinions.

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30 After defining the thesis as the paradoxical supposition of someone  
80,1 who is well-known in philosophy (for it is the proponent who makes  
the opinion worth investigating), Aristotle reasonably adds ‘for it is  
silly to pay heed to assertions contrary to current opinions made by  
just anybody’: such a claim would be despicable on all counts, having  
its character of being disapproved both of itself<sup>661</sup> and by virtue of its  
5 proponent. He speaks of ‘assertions’ so as to convey ‘if this person  
expresses them also without syllogistic argument’: for he will say that  
this kind of opinion too becomes a problem when it is posited accom-  
panied by a syllogism. So his claim is that those things too are theses,  
about which there are arguments and syllogisms contrary to common  
opinions. For even if these do not have a highly approved proponent,  
10 still the syllogisms about them, being contrary to the opinions on  
them established before, render them worth investigating: for what  
the opinion of the knowledgeable does for the earlier (class of) prob-  
lems, the proof and grounding of belief through the syllogism does for  
the present (class). Aristotle offers an example illustrating this type  
15 of thesis. A common opinion says ‘All there is, is either generated or  
eternal’. Sophists try to deny this through an argument rendering  
certain things neither generated nor being for all time. They obtain  
that ‘to be literate while being musical’<sup>662</sup> is a thing that is really  
there,<sup>663</sup> and then show that this is ‘neither eternal’ – since he that is  
musical was not always literate: there was a time when he was not –  
nor again ‘generated’: what happens is not that the musical person  
comes to be a literate person; if that were so, the literate person would  
20 have to come into being either out of the musical person as out of his  
matter – as the statue does out of bronze and as man becomes literate;  
but the musical is not the matter of the literate<sup>664</sup> – or as out of its  
contrary:<sup>665</sup> but the literate is not the contrary of the musical, they  
actually hold of the man at the same time: therefore it is not the case  
that the musical comes to be literate. They deduce from this that  
‘Therefore not all there is, is either generated or eternal’. Further if  
25 it is not the case either<sup>666</sup> that the literate person becoming musical  
came to be the musical literate person,<sup>667</sup> yet there is a literate  
musical person, then that which has not come to be, yet is. Further  
there is no art or science which teaches the literate musical person,<sup>668</sup>  
for no one becomes literate insofar as he is musical (the change is not  
from the latter into the former),<sup>669</sup> but one becomes both insofar as he  
30 is human. What the sophists say can also be said as follows. When  
someone has come to be first literate and then musical, this person  
has not come-into-being literate while being musical,<sup>670</sup> but he is  
literate while being musical. So the person who says ‘Being musical  
he is literate’ also says ‘The musical is literate.’ By contrast, that a  
81,1 thing is eternal or that it is generated was<sup>671</sup> said of things as they  
are by themselves.<sup>672</sup> Moreover, as a thing is (and this is by way of an

accidental), in the same way did it come to be: he who becomes musical, if it held of him beforehand<sup>673</sup> that he was literate (for these did not both hold at the same time),<sup>674</sup> still comes-to-be musical, and so the literate person came-to-be musical by way of an accidental. So these things come to be in the same way that they are.<sup>675</sup> For as Aristotle says, even if one does not believe these things – now referring to the paradoxes – to be worth investigating without qualification<sup>676</sup> but because some of this (class) are based on syllogistic inference, they may be believed to be for that reason worth investigating as a (class).<sup>677</sup>

That the thesis is within the (class) of the problem is something we know, since a problem was that about which the knowledgeable and the many have contrary opinions, and the thesis, as ‘a paradoxical supposition of one of those who are well-known in philosophy’ either about objects of choice and avoidance, or about objects of theoretical study, or about what contributes to one of these, involves an opinion of a knowledgeable person contrary to the many.

What Aristotle adds to the thesis,<sup>678</sup> ‘on which we have an argument contrary to the (current) opinions’<sup>679</sup> could be brought under the same species of problems, for the argument and syllogism,<sup>680</sup> by taking the place of the knowledgeable person,<sup>681</sup> turns these too into problems: such a syllogism is by itself a paradoxical supposition.

[104b29 Now the thesis too is a problem, but not every problem is a thesis, seeing that some of the problems are of the kind about which we have no opinion either way. That the thesis too is a problem is plain, for it is necessary from what has been said that a thesis is disputed either between the many and the knowledgeable or within whichever of these parties, seeing that the thesis is a paradoxical supposition. In practice, however, all dialectical problems are currently called theses. Yet it should make no difference whatever they are called, for we have not divided them in this way from a desire to coin words, but in order that (105a1) no differences which obtain in fact among them might escape us.] (104b29-105a2)

‘The thesis too is a problem’ – but this<sup>682</sup> does not convert. It is not true that, just as every thesis was a problem, so every problem is a thesis: among the problems there are also things ‘about which we have no opinion either way’, and one like this would not be a thesis.

Having thus separated the problem from the thesis, Aristotle has indicated to us how the thesis can be brought under one of the other problems which are dialectical because there are opposite opinions about them, and he both establishes and proves this when he goes on to say ‘for it is necessary from what has been said’ about the thesis

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'that a thesis must be disputed either between the many and the knowledgeable, or within whichever of these two parties, seeing that the thesis is a paradoxical supposition'. For the paradoxical supposition is paradoxical by the fact that there is an approved supposition opposed to it.<sup>683</sup> For the paradoxical supposition, when it has 'one of those who are well-known in philosophy' on its side, will involve one of the knowledgeable disputing either with the many or with other knowledgeable persons, and when the thesis is taken from among the cases in which we have a syllogism opposed to current opinions, it may also rest on the difference in opinion among the many, supposing that the proponent of the syllogism is not a knowledgeable person:  
 30 for the non-knowledgeable belong to the many. This is why Aristotle says 'or within whichever of these two parties', for those who state the argument and syllogism will either be knowledgeable and conflict with other knowledgeable persons or with the many, or belong to the many and conflict with opinions of the knowledgeable or of the many.

It can be made credible that when a little earlier on the subject of  
 5 the problem Aristotle said that 'problems are also those things of which there are contrary syllogisms'<sup>684</sup> and 'on which, important as they are, we have no argument'<sup>685</sup> he did not mean to add further species of problems but only to recapitulate what he had said before: one can make this credible also on the grounds of what he now says of the thesis, since, in showing that the thesis does not have the same extension as the problem, he does not mention these putative species  
 10 either when referring to the (class) of problems which does not, or to that which does include the thesis.

Having said all this of the thesis, and represented the type of thing he considers it to be – that which is not in and by itself or by its own nature worth investigating, but is included among the problems and objects of inquiry either for its proponent or for the argument supporting it: here *thesis* is used in contradistinction from 'nature' as it is in the imposition of names, where we also say names are 'by thesis'<sup>686</sup> meaning they are not by nature – Aristotle adds that in common usage almost all dialectical problems are called theses; at least people who argue<sup>687</sup> problems are said to argue a thesis. In fact  
 15 some people even use the name 'thesis' of rhetorical problems, for which the more usual name is 'hypothesis', based on their being held to be provided with a foundation upon certain determinate underlying subjects,<sup>688</sup> since dialectical problems are more general and universal. But what they call theses they also, dividing these,<sup>689</sup> call hypotheses. But Aristotle says we should not differ over the name of the thesis,  
 20 whether the dialectician applies this to every problem, as is common usage, or to the problem as here defined: we have not defined the thesis in this way 'from a desire to coin words', but in order to show  
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the difference among the problems; and once this is known, there is no need to quibble over the name. Here too he indicates to us that we should follow the customary usage of names while showing the differences in what is signified by them, not lay down the law ourselves and coin words according as we conceive differences in things, as is the habit of those who claim that pleasure is not the same as joy and eligible is not the same as acceptable.

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**105a3** But not every problem, nor every thesis, need be looked into, [but only those potential puzzles which call for argument rather than punishment or sense-perception. For people who wonder whether one ought to honour the gods and to love one's parents or not are in need of punishment, and those who wonder whether or not snow is white are in need of sense-perception.]  
(105a3-7)

After saying what kind of thing the dialectical problem is, and which of the problems in particular is called thesis, Aristotle provides additional determinations for these and shows that we have posited with good reason that the dialectical problem is something like this: for 'not every problem, nor every thesis, need be looked into' (he now seems to speak of problem and thesis as being on a par),<sup>690</sup> but only those problems which call for an argument to establish and prove them, not for sense-perception or for punishment. For the things which call for sense-perception or for punishment are neither among those on which people 'have no opinion either way' nor among those on which 'the knowledgeable have an opinion contrary to the many, or contrary opinions are held within either party'. In fact he seems to be saying that, even if paradoxical arguments and syllogisms<sup>691</sup> have been set up for problems of this type, which bring them under the definition of the thesis, still they should not be allowed, as he conveys by the determination just quoted. And through his examples he makes distinctly plain what things call for sense-perception and which for punishment.

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But one might inquire why things of these types should not also be problems: for if the problem encompasses a contradictory pair, it does not follow that the person who propounds<sup>692</sup> 'Whether or not one should revere the gods' and 'Whether or not one should honour their parents' claims that it should be shown that one ought not to revere the gods or honour his parents. So Aristotle is saying either that one should not inspect such parts of problems as these, or that problems like these are not dialectical at all. For in contradictory pairs where the one part does not call for arguments but for punishment because it is disapproved, there the other contradictory is not in need of arguments either, because it is approved<sup>693</sup> and evident: for a problem

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25 is only that which calls for a proof.<sup>694</sup> One who tries to establish through arguments things that have already found credence in this way, will render the foundation of these things which he provides through his arguments much weaker than the existing presumption and belief about them: this is why things like this were not dialectical problems at all but rather, because they are approved, propositions. Another reason why we need to guard against this class of problems, 30 is that a supply of attack arguments relating to them<sup>695</sup> often makes both speakers and listeners worse in character, which is quite contrary to our training, given that it is a preparation for philosophy. 84,1 Or,<sup>696</sup> even if it does not make them worse, it still makes them appear worse; and it is absurd that a person, in his effort to provide approved arguments, should through these very arguments make himself disapproved.

So in a problem consisting of a pair of contradictories one of which calls for punishment, the opposite of that one of the pair is a dialectical proposition, but neither of the pair is a problem. For if ‘those things whose demonstration is near at hand are not’ problems either, which is the next thing Aristotle says, then those things which due to their self-evidence render the persons who contradict them fit to be punished will *a fortiori* not be problems. Or the reason why things of this type are not problems is that argumentative attacking about problems is done on both sides of a question; where the possibility of argumentative attack on one side of a question is taken away, the question becomes incapable of being provided with a foundation.<sup>697</sup>

10 **105a7** Nor, obviously, (need we look into) those whose demonstration is near at hand, nor into those whose demonstration is too remote: [for the former do not involve a puzzle, and the latter do so more than is in keeping with a training.] (105a7-9)

Aristotle himself presents the reasons why those problems whose demonstration<sup>698</sup> is either conspicuous and well-known, or remote and highly obscure, are not dialectical either, by saying ‘for the former do not involve a puzzle and the latter do so more than is in keeping with a training’. For those ‘whose demonstration is near at hand’ are 15 easy and easily known: a brief spell of attention is enough to know them, as e.g. if someone propounds the question ‘Whether or not the human is an animal’. To this type also belong the questions investigated by the Stoics in their writings *On Duties and Proprieties*, as e.g. ‘Whether when breakfasting with your father, or with other people, you should reach out towards the larger portions lying farther away or content yourself with those lying next to you’, or ‘Whether when 20 listening to a philosopher we should have our legs crossed.’

But neither will he speak about<sup>699</sup> problems compounded in a

sophistical and superficial way, for it will at once be detected just what is here held to be in dispute, as e.g. 'Whether or not the masculine has masculinity', 'Whether or not the just person is unjust', 'Whether or not the wise person is unlearned': for the masculine will be held to lack masculinity because there is a type of coat called the masculine, the just person will be held to be unjust because he may sometimes commit unjust deeds, and the wise person unlearned because the unlearned person is the one who is learning and the wise person learns. To the same type belong 'Whether or not the blind is capable of seeing', or 'Whether or not the silent is capable of speaking':<sup>700</sup> such problems are eristical and superficial, and owe their pernicious effect to the duplicity of their wording.

The problems in the sciences and arts seem to be collected from among the dialectical problems too, since it has been laid down that dialectical problems are either about things 'bearing on choice and avoidance' or things 'bearing on discernment and truth' or about things which contribute to such problems: for the problems in the sciences and special arts contribute<sup>701</sup> either to choice, as do those in medicine, or to cognition and truth, as do those in geometry. This is why these too will be dialectical problems if they have the features mentioned before, the dialectician proving them not through principles peculiar to them but through what is approved, since, as Aristotle said before,<sup>702</sup> the dialectical method is one that syllogizes 'about every problem that has been put forward, from things approved'. For this reason all those problems in mathematics and the sciences which admit of more general<sup>703</sup> argumentative attacks may be regarded as dialectical problems, but all those which differ from these because they involve more theoretical study than is in keeping with a training, would be excluded from the (class of) dialectical problems. Thus 'Whether or not in every triangle the three internal angles are equal to two right angles' is not a dialectical problem: a more powerful and more accurate method is needed for establishing problems of this kind; it is the part of the geometrician to prove how it is with this. For the same reason the following problems in philosophy are not all of them dialectical either, as e.g. 'Whether or not there is one matter for all things', 'Whether or not matter is one', 'Whether or not atoms are the principles of all there is', 'Whether or not everything that moves another thing does this because it is itself moved', 'Whether or not motion is eternal': questions like these require fuller and more accurate attention.

So all approved tenets centring around things to be chosen and avoided, or relating to discernment and truth, or contributing towards one of these, these are dialectical propositions; and all that is such that people have no opinion on it either way, or that the

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knowledgeable have an opinion contrary to the many, or that contrary opinions are held within either of these (classes), these are problems.

### **<1.12 Species of dialectical argument: syllogism and induction>**

**105a10** These things having been determined, we must now distinguish how many species of dialectical arguments there are. [One of these is induction and the other syllogism. Now what syllogism is has been said earlier; and induction is the access through the particulars to the universal. For instance, if the best helmsman is the one who has knowledge, and the best charioteer also, then generally in each field the person who has knowledge about it is the best. Induction is more persuasive, clearer, better-known as being by sense-perception and so common to the many, but syllogism is more compelling, and so more efficacious against those committed to contradiction.] (105a10-19)

Aristotle proposes to say ‘how many’ and which ‘species of dialectical arguments there are’ in which the training is done and for which the instruments which will be offered are useful. He says there are two: induction and syllogism. Of one of these, the syllogism, he has just said what it is; now his subject is induction.

That these are the highest genera of the arguments through which proofs of things are produced can be seen from the fact that every one who proves something does so either through something universal and so<sup>704</sup> more general,<sup>705</sup> or through some of the things which come under it;<sup>706</sup> for nothing is itself proved through itself.<sup>707</sup> And what is equal would also be universal.<sup>708</sup> Proof through the universal is syllogistical, whereas proof through the things that come under the universal is inductive. The enthymeme is arranged under the syllogism and the example under induction, the enthymeme being a rhetorical syllogism and the example a rhetorical induction.

Induction, says Aristotle, is proceeding ‘through the particulars to the universal’.<sup>709</sup> Therefore it is unsound to say, as some do, that induction is an argument from the similar to the similar, since the universal is not similar to what comes under it, and induction is first of all meant to show the universal. ‘Argument from similar things to another similar one’ would be more apt to signify the example; for induction is the argument which shows the universal and makes it credible through the particular things. Thus the person who proves in general that in all things the person who knows is the best, by obtaining that the best helmsman is the person who knows (the art of helmsmanship), and so for the charioteer, the general, the physi-

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cian, the geometrician, the musician and the carpenter, is producing through induction the proof that the person who knows is the best in all things.

Aristotle also says what the difference between syllogism and induction as to their usefulness is. He says that induction is ‘more persuasive’ and ‘clearer’, and adds in what way it is clearer:<sup>710</sup> it is because it is ‘by sense-perception’, which is something ‘common to the many’, that it is ‘better-known’.<sup>711</sup> For induction proceeds through particulars, which can be perceived by the senses, and sensible things are common and well-known even to the many. So induction has the quality of persuasiveness; but it does not have that of necessity. For the universal does not follow by necessity from the particulars once these have been conceded, because we cannot get something through induction by going over all the particular cases, since the particular cases are impossible to go through.<sup>712</sup> For even if you did go through all of them, then the one for whose sake you employ induction will either be granted also, in which case this one no longer needs the granting of the universal so as to move from that to this particular one, and so the argument is no longer inductive; or this one<sup>713</sup> is not among the things granted, and there is a starting-point for an objection<sup>714</sup> against taking the universal for granted<sup>715</sup> precisely in this case on the plea that it does not resemble the cases which have been conceded. The syllogism, on the other hand, though it has less persuasiveness, does have the feature of being necessary and compelling,<sup>716</sup> and so is more efficacious against those who try to contradict, since it effects and concludes what is at issue<sup>717</sup> more <than induction does>; for there is no room for contradicting left to persons who have conceded syllogistical premisses, whereas there is with induction, because, as I said, we cannot go over all particular cases.

Just as not every syllogism is dialectical, neither is every induction. For even if every induction has the quality of persuasiveness, which is appropriate to dialectic, it does not follow that proof through induction is peculiar to the dialectician. In fact the induction that is obtained<sup>718</sup> for the sake of proving and obtaining the universal is appropriate to dialectic alone or especially, for we use this induction for (the sake of<sup>719</sup> the answerer’s) conceding<sup>720</sup> the universal on the strength of his assent to the assumptions obtained.<sup>721</sup> On the other hand the induction which contributes to obtaining axioms, used for the sake of making distinct what is meant, not for the sake of proving the universal<sup>722</sup> – for this is known from itself as soon as it is thought<sup>723</sup> – is no longer dialectical,<sup>724</sup> nor even induction in the strict sense.

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### <1.13 The instruments>

15      **105a20** [Let] the kinds [of things which arguments are about, and what they are from, be determined as was said earlier.] (105a20-1)

Aristotle says which four things he has set out: the definition, distinctive property, genus and accidental. For ‘things which arguments are about’, i.e. problems, are found in these kinds, and so is ‘what they are from’, i.e. propositions. He has also said what each of these two is<sup>725</sup> – he had said at the outset<sup>726</sup> that this had to be specified, what 20 are the things ‘which arguments are about, and what they are from’.

**105a21** The instruments through which we can be supplied with syllogisms [are four: one is obtaining premisses, the second is being able to distinguish in how many ways a thing is said,<sup>727</sup> the third is finding the differences, and the fourth is the study of similarity.] (105a21-5)

This had not yet been included, and is the last of the things Aristotle said the dialectical method resides in: for after saying ‘So first we have to study what the method consists of ...’ he went on to say

25      ‘Obviously if we grasp the number and kinds of things arguments concern, and what they are from, and how we can be supplied with these things,<sup>728</sup> then we shall have an adequate grasp of what we set out to accomplish’. So after speaking of both propositions – denoted 88,1 by the phrase ‘what they are from’ – and problems – which he denoted by the phrase ‘the number and kinds of things arguments concern’ – he now proposes to speak of the instruments which contribute to the finding and supply of dialectical arguments. These, as he said earlier, are syllogism and induction. However, he only mentions syllogisms; 5 what he says is equivalent to ‘There are four instruments through which we can be supplied with’ dialectical arguments.

One of these, he says, is ‘obtaining premisses’. He does not call the premisses themselves instruments of dialectical arguments, since they are parts of both syllogisms and inductions, and a thing’s parts are not its instruments; what he calls an instrument is that through which we can be supplied with premisses: not premisses, but that 10 which enables us to be supplied with them, is an instrument. The second instrument which contributes towards the supply of propositions, Aristotle says, is being able to recognize and divide things said in many ways, whether in names or in phrases.<sup>729</sup> A third one is being able to discern the differences of things, by which they differ from one 15 another.<sup>730</sup> The fourth is being able to find the similarities in things which differ from each other.

It is plain that collecting and preparing propositions is useful for producing syllogisms, for if we possess a collection of dialectical, that is to say approved premisses, we shall easily 'be able to syllogize about the problem put forward'.<sup>731</sup> Aristotle will tell us later on what is the use of the other instruments – of having considered the division of things said in many ways, being able to discern and find the differences, and the study of similarity<sup>732</sup> – after describing the method which belongs to each of them.

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**105a25** In a way the <last> three of these are propositions too: [for by each of them it is possible to produce a proposition, such as that the noble is to be chosen, or the pleasurable is, or the expedient is; and that sense-perception differs from knowledge in that with the one it is possible for someone who has lost it to get it back, but with the other this is impossible; and what is healthful is to health as what pertains to fitness is to fitness. Of these propositions the first is based on what is said in many ways, the second on differences, and the third on similarities.] (105a25-33)

That is to say 'the last three of these too are in a way' contributing to collecting the premisses of which both syllogisms and inductions consist. For dividing of things said in many ways yields a supply of propositions, and so do the finding of differences and the study of similarities:<sup>733</sup> for the thing said in many ways becomes a proposition by the very process of being divided,<sup>734</sup> and so with each of the others. Aristotle shows this through the example 'That what is to be chosen is the noble, or is the pleasurable, or the expedient'. For from the division of this<sup>735</sup> we can if we have<sup>736</sup> this proposition mount an argumentative attack on the problem 'Whether or not one should choose to be a tyrant?': for if everything that is to be chosen is either noble or pleasurable or expedient, and tyranny is none of these, then it cannot be something one should choose. Again, if from the dividing of body we get that a body is either physical or mathematical, we shall be supplied, with a view to the problem 'whether the soul is a body or not?', with a syllogism by which we prove that the soul is neither a physical nor a mathematical body; and similarly from the dividing of the good too we get a syllogism with a view to the proposition that not only the noble is good or that not only the good in the soul is good.

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Again, Aristotle shows through an example how a supply of propositions arises from the discerning of differences: if we know 'that sense-perception differs from knowledge in that having lost the one you can get it back, but having lost the other, sense-perception, you cannot', we can be supplied with propositions with a view to the problem 'Whether or not sense-perception and knowledge are the

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same?", since if we know the differences between these, we can prove they are not the same. Along the same lines as Aristotle's own example we can also prove this by the fact that knowledge can, but sense-perception cannot, be acquired from someone else; and as follows: sense-perception you can, but knowledge you cannot, have to

15 greater and smaller degrees; and sense-perception is, knowledge is not, from and by birth; and the former is, the latter is not by nature; the former is shared by all animals, the latter is reserved to those endowed with speech.<sup>737</sup> Similarly if we know the difference between opinion and knowledge, we can get<sup>738</sup> propositions with a view to showing they are not the same, given that the former is about things which may be other than they are,<sup>739</sup> but knowledge is not.

20 Again, Aristotle presents a proposition which is found as a result of the study of similarity: 'that what is healthful is to health as what pertains to fitness is to fitness'. If we have this proposition, we can get a supply for the problem 'Whether or not the things which pertain to fitness produce fitness?': for if

These are to fitness as what is healthy is to health, and

25 What is healthy produces health, then

What pertains to fitness will produce fitness.

Again, if it is investigated whether or not calmness of the sea<sup>740</sup> is a form of quiet, then through studying similarity we get the proposition

Stillness of wind is in the air as calm is in the sea  
and then by obtaining in addition that

Stillness of wind is a quiet

we have shown that

Calmness of the sea is a quiet.

30 If the last three instruments contribute towards being supplied with propositions, it was with good reason that, when at the outset Aristotle stated around what things the essential nature of dialectic centres,<sup>741</sup> in the words 'if we grasp the number and kinds of things arguments concern, and what they are from', he added 'and how we can be supplied with these' – if indeed the instruments all contribute towards the supply of premisses, and premisses are the matter<sup>742</sup> of syllogisms.

#### **<1.14 Collection and classification of propositions>**

5 **105a34** We must collect propositions in as many ways as we have determined on the subject of propositions:<sup>743</sup> [getting ready the opinions of either all or most or the knowledgeable, and of the latter either all or most or the best-known – provided these opinions are not contrary to the (105b1) apparent ones<sup>744</sup> – and

all those opinions which are in accordance with an art. And we should also propound by contradiction those<sup>745</sup> contrary to the apparent<ly approved><sup>746</sup> ones, as was said earlier.<sup>747</sup> And it is also useful to produce them<sup>748</sup> by collecting not only those opinions which are actually approved but also those similar to these, such as that contraries are objects of the same sense-perception, since they are objects of the same knowledge, and that we see by receiving something into ourselves, not by emitting something, since this is how it is with the other senses: in hearing too we receive something inside, we do not emit anything, in tasting it is just the same, and so with the others.<sup>749]</sup> (105a34-b10)

First Aristotle speaks of the collecting of propositions, offering certain topics (i.e. 'places') and (so) starting-points<sup>750</sup> for the collecting and supply of them: for in just as many ways as we have marked off the approved and dialectical proposition, according to all of these<sup>751</sup> are we to collect them:<sup>752</sup> we must have ready a collection of things which are held to be true by all and by most, and with the knowledgeable too we need what is held to be so by all, by most and by the most highly approved among them. But he says one should also collect propositions contrary to approved ones, since a collection of these yields a supply of dialectical propositions propounded as their contradictories: for a person who has the proposition that 'One must harm one's friends', which is contrary to an approved proposition, in actual practice<sup>753</sup> will be supplied with a dialectical proposition by propounding it in the negative. Aristotle makes this plain by saying<sup>754</sup> 'we should also propound by contradiction the ones<sup>755</sup> contrary to those which appear to be approved':<sup>756</sup> by these words<sup>757</sup> he specifies how we should use and obtain<sup>758</sup> 'the ones contrary to the apparent' dialectical propositions.

Aristotle says we should also collect 'all those opinions' which have been discovered<sup>759</sup> 'in accordance with the arts', e.g. those in geometry discovered by geometers, in music by musicians, or at least by the more distinguished<sup>760</sup> among these:<sup>761</sup> for someone might assent to a claim, as being an approved one, of Hippocrates in medicine, of Archimedes in geometry or of Aristoxenus in music.

Aristotle says it is also useful with a view to collecting and preparing approved propositions to collect not just the approved ones but also 'those similar to' these, and make these approved themselves by juxtaposing and comparing them with the approved ones, as he also said in his account of propositions.<sup>762</sup> For if it is approved that contraries are objects of the same science, it is similar to this to say that contraries are objects of the same sense-perception.<sup>763</sup> Each claim of this kind can become approved by juxtaposing it with a similar one

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91,1 that is approved. Thus when propounding we should say 'Is it the case that contraries are objects of the same sense-perception,<sup>764</sup> just as with science?', or '... since they are objects of the same science as well?'; and 'Is it the case that we see because something is acting upon our eyesight? For with the other sense-perceptions too this is how we  
 5 have an apprehension.' For these propositions are conceded more easily because they are similar to approved ones. To this type also belongs 'Is it the case that, just as we should benefit our friends, so we must not harm them?'

**105b10** Further all those things that appear to be the case in all or in most instances must be taken as a principle and as a thesis held to be true: [for people assent to these when they do not have a comprehensive view as to in which instance it is not the case.<sup>765</sup>] (105b10-12)

10 Aristotle says that with those things which appear to be the case 'either in all or in most instances' one should obtain them universally<sup>766</sup> as being principles, true, and held to be the case by all and thus posited (he now uses the name thesis of being conceded and posited),<sup>767</sup> i.e. one should use propositions of this type as being agreed and as principles, even if what is said is not in truth so in all instances.  
 15 To this type belongs 'The contrary of the greater good is the greater evil', for even though this is not so 'in all instances', it still appears to be because it is so 'in most instances'. Nevertheless there are instances due to which the universal is not true:<sup>768</sup> thus with health and sickness and fitness and unfitness it is shown to be the other way  
 20 round, as we noted in our first comments.<sup>769</sup> For fitness is a greater good than health; at any rate fitness brings health with it,<sup>770</sup> whereas health does not bring fitness with it, which is why the latter is the greater good: for if one thing brings another thing with it but the second thing does not bring the first with it, then the first, whether good or evil, is the greater of the two. But the contrary of fitness, i.e. unfitness, is not a greater evil than the contrary of health, i.e. sickness; on the contrary, sickness is a greater evil than unfitness  
 25 since sickness brings unfitness with it – every sick person is unfit – but unfitness does not bring sickness with it: some people are unfit although in good health. And something similar to this: if, among two pairs of contraries,<sup>771</sup> one from the one pair follows<sup>772</sup> one from the other pair, then the other one in the first pair follows the other one in the second.<sup>773</sup> Thus since distending follows white, compressing follows black,<sup>774</sup> and since pleasure follows sweetness, pain follows bitterness. Thus it is in most cases, but in some it is the other way  
 92,1 round, as with what we mentioned before, health and sickness and fitness and unfitness: it is not the case that because health follows  
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fitness, therefore sickness follows unfitness; on the contrary unfitness follows sickness. And so with this one: 'That whose highest and best form is preferable is itself preferable.' This is so in most but not all cases: dying well, the highest form of dying, is preferable to writing well, the highest form of writing, yet dying is not preferable to writing. Of the same type is the (proposition), taken universally, that the principle<sup>775</sup> of animals is the heart: this is so with most of them, yet not universally, for there are animals which do not have a heart to begin with.<sup>776</sup>

It may be inquired what is the difference between these cases and things held to be true by all or most. Aristotle seems to mean<sup>777</sup> either<sup>778</sup> that one should not put these as questions<sup>779</sup> to begin with, but should use<sup>780</sup> them as agreed and as principles, for neither does anyone put the principles as questions either: he treats and uses them as agreed; or he says that with cases of this type, even if they are not held to be true<sup>781</sup>, one should obtain them inductively.

**105b12** One should also collect them<sup>782</sup> from written works [and draw up tables concerning each genus of things, putting them under separate headings, such as concerning good, or living being – i.e. about good as a whole, beginning with the what-it-is. And one should mark their opinions individually, such as that it was Empedocles who claimed that physical bodies are composed of four elements: for people will assent to what has been said by a person who is approved.] (105b12-18)

After saying how we must search for and muster dialectical propositions Aristotle says one should not take them only from opinions spread by word of mouth, but also collect and have prepared 'from written works' whatever they contain that is approved, since it is not easy without preparation to be supplied on the spur of the moment with propositions which can be used for the problem at issue. He says we should not collect them all mixed together, but organized in tables, separately, with each genus having its own, since they will be useful for us if we know where we can find them when we need them. Within each genus too we should impose some order on them, e.g. under a heading of their own (propositions) about animal, on the good, on every good on its own, and so for each item in each genus, we should put first the question what it is, as e.g. that 'Every animal is an animate substance capable of sense-perception', or that it is a substance, and then what kind of thing: animate, and capable of sense-perception; or in general whether any thing<sup>783</sup> holds of it, as e.g. that every animal is either terrestrial or aquatic or winged, or that not every animal has respiration, or that not every animal is horned and has incisor-teeth in both jaws; but also whether there is any thing

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5 contrary to the thing in question, and what is contrary to it, or what it follows upon, and what follows upon it.

Also useful are such things as e.g. that ‘shrewdness is a knack of hitting the mark within an unobservable span of time’,<sup>784</sup> or the sun a ‘star shining by day’,<sup>785</sup> or the good is what all strive for, or virtue and excellence is a person or thing’s optimal disposition, or happiness is the smooth flow of one’s life, and that being-other-than is followed by what necessarily is, but what necessarily is not conflicts with it.<sup>786</sup> Just this is what Aristotle has done in the ten *Categories*,<sup>787</sup> where he speaks of each category. For these things bring the interlocutor over to one’s side because what is offered is evident, which is why one should have a collection of them at hand.

It may be that the phrase ‘beginning with the what-it-is’ refers to the good, since this is held to reside in all the ten kinds:<sup>788</sup> Aristotle says we should speak<sup>789</sup> of all of the good,<sup>790</sup> beginning with what is good in <the category of> substance: for the what-it-is is, strictly speaking, in <the category of> substance.

Aristotle says in our collections we should ‘mark their opinions individually’ and note their name,<sup>791</sup> since people often concede more easily what is said when they have learnt whose word it is, and what they will not concede as a flat statement, they do assent to once they have learnt who said it.

20 **105b19** There are, in outline, three parts<sup>792</sup> of propositions and problems: [some propositions are ethical, some scientific, and some logical. Ethical ones are such as the following: whether<sup>793</sup> one ought rather to obey the rule of his parents or of the laws, if there is discord between these; logical such as whether or not contraries are objects of the same branch of knowledge; and scientific, whether or not the world is eternal. And similarly for the problems. It is not easy to render what each of the said (parts) is by a definition; we must try to recognize each of them by a familiarity reached through induction, inspecting them in the light of the examples just mentioned.] (105b19-29)

Speaking of the problem a little earlier,<sup>794</sup> Aristotle said ‘a dialectical problem is a theorem which bears either on choice and avoidance or on discernment and truth, either by itself or as contributing towards another such theorem’. What he said of it then – and we have noted that not just the problems but also the propositions are involved in these matters – he repeats here. He says they are general ‘parts’, in the sense of<sup>795</sup> ‘species’, ‘of propositions and problems’ universally, i.e. of the dialectical ones, since there are problems and propositions which are neither ethical nor scientific nor logical: those in the arts and the sciences, as e.g. in geometry, or music.

Of the propositions, and likewise of the problems, ‘some’, says Aristotle, ‘are ethical’: by ‘ethical’ he means those about things contributing ‘to choice and avoidance’; and ‘some are scientific’: this equals contributing ‘to discernment and truth’, for all problems of science in their pure form have reference to a discerning of what is true in matters of science,<sup>796</sup> even if there are people who apply their experience<sup>797</sup> in these matters to practical uses. And some he says are logical propositions: he now calls logical what he then<sup>798</sup> expressed by ‘or as contributing to another such theorem’, by which he shows that what belongs to logic is instrumental and is used for its contribution to other problems. Through his examples Aristotle shows which propositions are ethical, which scientific and which logical.

Aristotle adds the phrase ‘in outline’, because we cannot maintain a clear-cut demarcation calling propositions ‘bearing on choice and avoidance’ ethical, and others bearing ‘on discernment and truth’ scientific: for in some instances these descriptions shift, as he will say below.<sup>799</sup>

Putting in front<sup>800</sup> the phrase ‘for some propositions are ethical’ as if he were going to speak of propositions, but also continuing with ‘and similarly problems’,<sup>801</sup> he gives his examples in the form of problems: he uses ‘Whether’, which is appropriate to problems, just as ‘Is it the case that’ is to propositions, apparently no longer observing in the wording the difference between these because it is generally possible to turn a dialectical problem, so far as its wording is concerned, into a proposition, and every proposition into a problem, by the interchange of ‘Whether’ and ‘Is it the case that’. However, the difference between them as to content does not allow of this interchange, since problems should be subject to dispute, but propositions should be credible of themselves.<sup>802</sup>

Aristotle says it is not easy to comprehend the species of propositions mentioned before in a universal definition, and one should accustom oneself ‘through induction’, ‘on the lines of the examples just mentioned’, to being able to recognize the differences between them.<sup>803</sup> For the person who says that problems which bear ‘on choice and avoidance’ are ethical problems, does not comprehend all of these, as he said a little earlier:<sup>804</sup> whether the virtues follow from one another is a problem of ethics,<sup>805</sup> yet knowing the answer does not have reference to a choice but to an act of cognition; similarly ‘Whether or not pleasure is a smooth motion?’ is a problem of ethics, yet knowing the answer<sup>806</sup> does not contribute to choosing or avoiding. So Aristotle said with good reason that it is not easy to render ‘what each of the said (parts) is by a definition’. We shall call propositions of ethics such propositions as that the person who does not participate for the sake of being noble<sup>807</sup> does not act like a free-born person; that virtue is to be chosen for itself: everything that is about what is to be

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chosen or about what is to be done. Propositions of science we shall call those about increase, movement, coming-to-be and passing away, and that everything that has come to be is perishable, and those connected with these. Here among those of<sup>808</sup> science too we find some problems and propositions which have reference 'to choice and avoidance: 'Whether all things happen according to fate and by necessity?'

10 is a problem of science but has reference 'to choice and avoidance', since it depends on this whether we decide to deliberate about what should be done or not. And propositions of logic <we shall call>: that relations are given with the nature of a thing;<sup>809</sup> that contraries are the objects of the same science; that contradiction divides between the true and the false;<sup>810</sup> problems about genus and species, about the syllogistic figures, about the (syllogistic) pairs<sup>811</sup> and about propositions. By all of this Aristotle indicates that we should collect propositions for each species of problems – ethical, scientific and logical – on its own.

**105b30** With a view to philosophy we must treat of these things according to the truth, [but dialectically (we must treat of them) with a view to opinion.] (105b30-1)

After saying that some problems and propositions are ethical, some 20 scientific and some logical, Aristotle adds that the philosopher's examination and treatment of these should proceed according to what is true. He will deal with these in each of the said species<sup>812</sup> for the sake of finding the truth: in lectures on ethics and politics with problems of ethics, so that he will collect propositions truly bearing 25 on choice and avoidance, about things truly to be chosen; in lectures on theoretical subjects<sup>813</sup> and science he will investigate what is genuinely true, and in the *Analytics*, in work on propositions and in distinguishing things said in many ways and the like, he will collect what is truly useful from a logical point of view.

'But dialectically we must treat of them with a view to opinion', as 30 in the present treatise, in his *Rhetoric* and his works for outsiders: in these too a great deal is said on problems both of ethics and of science which is merely approved.<sup>814</sup>

96,1 **105b31** We must take all propositions as generally as possible [and produce many out of one, such as <first> that opposites are objects of the same branch of knowledge, and then that contraries are so, and that correlatives are. In the same way we must in turn divide these too, as far as it is possible to go on dividing, for instance (into the propositions) that good and bad are objects of the same branch of knowledge, and that white and black are,

and that cold and hot are; and similarly for the others.

(106a1) So much will do for the propositions.] (105b31-106a1)

Aristotle says this too is useful for being supplied with several propositions and arguments, to try to take the propositions ‘as generally as possible’ when collecting, since we shall thus from taking just one proposition be supplied with more than one, e.g. not just that contraries are the object of the same branch of knowledge, but ‘that opposites are’: for once we have this we also have, through it, that ‘contraries’, and things between which the difference is that between possession and privation,<sup>815</sup> and ‘correlatives’,<sup>816</sup> and things opposed as contradictories, are all objects of ‘the same branch of knowledge’.

But we should also divide each of these again and take the things which come under each of them, e.g. under the contraries that ‘good and bad’ are objects of the same branch of knowledge, ‘white and black’ of the same sense-perception:<sup>817</sup> eyesight, and ‘cold and hot’ too: that of touch, and so for moist and dry. (Aristotle seems to be using ‘knowledge’ more generally for discernment, which<sup>818</sup> can also proceed through sense-perception.) But ‘similarly with other things’ too:<sup>819</sup> with things in a relation for instance ‘double’ and ‘half’, and ‘heavier’ and ‘lighter’, and things similar to each other, are all objects of the same discernment; with possession and privation for instance seeing and blind, and hearing and deaf, relate to the same capacity for discernment,<sup>820</sup> and with contradiction too the person who knows that this affirmation is true also knows that the negation which is its opposite is false, and vice versa. Again, what we should take is that every motion is a change from one place to another, not just that locomotion is: for as soon as we have the former, we also have the following, that coming-to-be, passing away, alteration, increasing and decreasing are forms of change from one place to another.

### <1.15 Distinguishing uses of terms>

**106a1** [So much will do for the propositions.] As to in how many ways a word is used, we should not just treat of all the things of which it is used in one way or another, [but also try to give the accounts of these:<sup>821</sup> for instance, <we should say> not just that justice and courage are said to be good in one way and what pertains to fitness and to health in another way, but also that the first two are said to be so because they are themselves of such and such a kind, but the second are said to be so because they are capable of making<sup>822</sup> something and not because they are themselves of this kind; and just so for the others.] (106a1-8)

The second of the four things that Aristotle said can be used as

instruments for our syllogisms was being able to recognize and divide what is said in many ways. He proceeds to this after laying down how we can get a supply of propositions, and offers us certain topics (or ‘places’) and (so) starting-points<sup>823</sup> through which we can recognize whether what is at issue is among things said in many ways or is said in just one sense. But since ‘in many ways’ comes in two forms, one in names, called ‘homonymous’, the other in a phrase, where we usually say they are ‘ambiguous’, Aristotle here shows how we can recognize duplicity in names. But first he offers a precept to instruct us how to produce the division and account of things said in many ways. He says we should not merely provide those things which differ from each other, yet are signified by the same (expression), saying or writing for instance that ‘good’ is said of justice and courage in one way and of what belongs to fitness and to health, which are also called good, in another way; we should add that the one set are called good as dispositions and as being good by themselves, as are the virtues – for Aristotle uses ‘of such and such a kind’ instead of ‘good’; of course what belongs to health too is ‘of such and such a kind’ without further qualification – whereas the other set are called good as producing good, as is what belongs to fitness or to health: these are good because they produce good, according to Aristotle’s usual division of goods. This is why the things called good as dispositions make those who possess them good ‘because they themselves are of this kind’, whereas the goods so called as producing some good are neither good by themselves, nor do they make their possessors good, they only make them possessors of a good. For this is how we can know distinctly that a thing is said in many ways: if in rendering the things signified we differentiate between them, giving to each its own peculiar account.<sup>824</sup>

**106a9** Whether <a thing> is said in many ways <differing> in species or in just one [is to be studied through the following.] (106a9-10)

Having told us how we should divide things said in many ways, Aristotle goes on to offer us the method by which we can recognize these.<sup>825</sup> To the phrase ‘Whether in many ways or in just one’ he adds ‘in species’, with good reason: things signified are homonymous and ambiguous and said in many ways when they differ from each other in species and in account and in their very definition. It is true that ‘genus’ and ‘species’ are said in a number of ways – both are predicated of more than one thing – but since the things of which they are predicated do not differ in species and in the account that corresponds to<sup>826</sup> the name they share, neither genus nor species is called homonymous or ambiguous; homonymous, as Aristotle says in the *Categories*, are ‘things that share only a name, whereas the account of their

essence that corresponds to the name is different<sup>827</sup> – which is what he here calls species. That Aristotle uses ‘in species’ for ‘in account’<sup>828</sup> comes out when he goes on to say ‘whether they disagree in species or in name’.

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**106a10** First see whether the contrary is used in many ways, [whether they disagree in species or in name. For with some things the fact that the contraries are different is at once seen in the words naming them: e.g. ‘sharp’ has for its contrary ‘flat’ in vocal sound, ‘dull’ in mass; so it is plain that the contrary of sharp is said in many ways; and if that is so, then so is ‘sharp’, for the contrary will be a different one corresponding to either of these ways; for although sharp is contrary to both dull and flat, it will not be the same sharp that is contrary to both of them. Again, ‘flat’ has as its contrary ‘sharp’ in vocal sound, but ‘round’ in mass; so flat is said in many ways, seeing that its contrary is. Similarly ‘fine’ has for its contrary ‘base’ in a living being but ‘paltry’ in a house, so ‘fine’ is homonymous.]

In some cases, however, there is no difference in the words naming the contraries, yet it is at once plain to see that they are different in species, as with bright and dark. For vocal sound is called bright and dark, but so is colour. In their names, then, there is no difference, but the difference in species within the things themselves is plain at once, for colour and vocal sound are not called bright and dark in the same way. This is already plain through sense-perception, for things which are the same in species are objects of the same sense-perception, but brightness in vocal sound and in colour we do not judge by the same sense – we judge the former by hearing, the latter by sight. And similarly with sharp and dull in taste and in mass too (we do not judge them by the same sense): on the contrary (we judge) the one by taste, the other by touch. For these are not different in the words naming them either, neither in themselves nor in their contraries, for ‘dull’ is the contrary of both of them.] (106a10-35)

In offering starting-points based on opposed terms for the finding and judging<sup>829</sup> of things said in many ways, Aristotle first shows how we may recognize a thing said in many ways on the basis of contraries. He says that if the thing of which we are investigating whether it is said in many ways has a contrary, we should see whether this contrary is said in many ways, either with respect only to the thing, or also to the name, or rather names, by which it is said to be: for this is meant by ‘whether they disagree in species or in name’: i.e. ‘both if it does so in name too and not only in species’.<sup>830</sup> For with some things,

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such as those which Aristotle presents, the very names of the contraries of a thing are different; thus ‘sharp’ has two contraries, ‘flat’ and ‘dull’: ‘flat in vocal sound,<sup>831</sup> dull in mass’, but also ‘sweet’ in taste, which are different not just in species, i.e. in the thing which is their subject,<sup>832</sup> but also in their names: flat is one name, dull another and sweet a third. So given that ‘sharp’ is the contrary of both or all<sup>833</sup> of these, it follows that it is said in many ways, and a part<sup>834</sup> of it, that  
 20 which is the contrary of flat, resides in vocal sound, a part, that which is contrary to dull, in mass, and a part, that which is the contrary of sweet, is in taste – since obviously the same sharp<sup>835</sup> cannot be contrary to flat and to dull and to sweet, yet each of these has sharp as its contrary, so these must be different sorts of sharp. (It should be noted that in the sequel Aristotle himself names the contrary of sharpness in taste ‘dull’.) Similarly ‘flat’ has two contraries, ‘sharp’ and ‘light’: ‘sharp in vocal sound, round in mass’;<sup>836</sup> it follows that ‘flat’ is also said in many ways. In the same way it can be shown that ‘fine’ is said in many ways, since both ‘base’ and ‘paltry’ are contraries of it, ‘base in a living being’ and its form – for living beings are called fine and base – and ‘paltry in a house’, for a house which is not fine is not called base but paltry.<sup>837</sup>

Yet by<sup>838</sup> making use of this topic it can be shown that cowardice too is among things said in many ways, for it has both courage and boldness as contraries, which are more than one and not the same thing.<sup>839</sup> In fact this does not necessarily follow.<sup>840</sup> In the preceding instances the whole of what is signified by a name is contrary to either of two alternative contraries; here one and the same thing is the contrary of both, but not in the same respect. In part of the features in which cowardice has its being it is the contrary of courage, in another part of boldness, given that cowardice is a bad condition and a deficiency in the particular emotions involved: contrary to courage in being a bad condition and a disproportion in these emotions, to boldness in being a deficiency in them; it is not the contrary of boldness in being a bad condition with respect to them, since this is a feature it shares with it, nor of courage in being a deficiency in them, since what is deficient in them is not contrary to what is a mean with respect to the same. However, cowardice is not either deficiency or bad condition taken separately but what is both of these things together, and so it can be shown to be composite, but not said in many ways. Courage too, being contrary to both cowardice and boldness, which are different things, is their contrary in what they share with each other, i.e. insofar as they are a disproportion and a bad condition with regard to these emotions, and so it is the contrary of both as if of one.

In some cases two contraries of one thing do not bear different names, but still the difference between the two things is clear, and so it can be shown that the one thing whose contrary they are is said in

many ways, since it is the contrary of two objects precisely as they differ from each other. Thus bright<sup>841</sup> has as its contrary dark, but darkness is found partly in vocal sound – we speak of ‘a dark voice’ – and partly in colour; and since these differ in species and account, it can be seen that bright too is said in more than one way: either of the two parts of darkness has as its contrary the brightness that is peculiar to it, the one in vocal sound, the other in colour.

By showing that the darkness in sound is different from that in colour, Aristotle at the same time teaches us the method for judging differences: ‘for things which are the same in species are objects of the same sense-perception’. And if that is so, then things which are not objects of the same perception are not the same in species. But the same perception is not the judge<sup>842</sup> of both darkness in sound and in colour – eyesight is so of the latter, hearing of the former – therefore if things which have different criteria are different things, then these too are different things. We can also show that items are homonymous<sup>843</sup> by applying this<sup>844</sup> not to a thing’s contraries but just to the thing itself, as e.g. with colour: since one part of this is judged by eyesight, the other by the musical ear, colour is homonymous, even though it has no contrary. So this topic for the search for what is said in many ways would seem to be similar to the ones just mentioned.<sup>845</sup>

‘Blunt’ can be shown to be said in many ways, because its contrary ‘sharp’ is so too: sharpness is partly in vocal sound and in mass, therefore dullness too is twofold, part of it in sound – we speak of ‘a dull voice’ – and part in mass.

And after saying ‘neither in themselves nor in their contraries’, Aristotle shows how these parts do not differ in the name of their contraries either, by saying ‘for “dull” is the contrary of both of them’.<sup>846</sup> – except that Aristotle’s own example is dullness in taste<sup>847</sup> rather than in mass.

**106a36** Further, whether the one has a contrary and the other does not without qualification have a contrary, [such as for instance the pleasure of drinking has for its contrary the pain of being thirsty, but the pleasure of considering that the diagonal is incommensurable with the side (106b1) has no contrary, so that ‘pleasure’ is said in more than one way. Also, cherishing in thought has disaffecting as a contrary, but cherishing by physical activity has none, so it is plain that cherishing is homonymous.] (106a36-b4)

The second topic for finding what is said in many ways, also from contraries, which Aristotle sets out is: whether one of the things signified by that of which it is inquired whether or not it is said in many ways, does and the other does not have a contrary. For we can

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20 see that the thing in question<sup>848</sup> will then signify things differing in nature, and so be said in more than one way. For instance in the case of pleasure: since ‘the pleasure of drinking’ has as its contrary ‘the pain of being thirsty’, but ‘the pleasure of considering’ either a matter of geometry, e.g. ‘that the diagonal is incommensurable with the side’,<sup>849</sup> or a matter of philosophy or some other science has no  
 25 contrary, therefore pleasure must be said in many ways, for what has no contrary differs in species from what has one. In the same way we can show that cherishing is homonymous, because ‘cherishing in thought has disaffecting as a contrary, but cherishing by physical action’, which we usually call ‘cuddling’, has no contrary. And in the  
 30 same way we can show that substance is homonymous, since substance in the sense of species form has as its contrary privation,<sup>850</sup> but substance in the sense of matter<sup>851</sup> has no contrary.

101,1 One might inquire whether this second topic does not tend to cancel out the previous one,<sup>852</sup> since the one showed that if one of a pair of contraries is said in many ways then so is the other, whereas the present one shows that a thing may not be said in many ways even if  
 5 its contrary is. For if we convert the terms and start with hating we shall find that its contrary, cherishing, is said in many ways, yet hating is not.

In fact the present topic does not tend to cancel out the earlier one: there it was obtained that, if the contrary of a thing is said in many ways and this thing is contrary to all these ways,<sup>853</sup> then this thing too is said in many ways, for Aristotle said ‘sharp is contrary to both’,<sup>854</sup> therefore sharp is said in many ways; but here what is  
 10 obtained is not the contrary of all the things signified by its contrary, rather hating does not even have as its contrary cherishing said in many ways, but only a part of this cherishing. For this reason the earlier topic will not be discredited<sup>855</sup> as if it did not prove the thing in question.

15 **106b4** Further, with intermediates, whether there is an intermediate for one<sup>856</sup> but not for the other, [or whether there is one for both, but not the same one, such as with bright and dark in colours there is grey, but (with bright and dark) in vocal sound there is none, or if there is one it is husky, as some people call an intermediate vocal sound husky; therefore bright is homonymous, and so is dark. And also whether for one there is more than one intermediate but for the other just one, as with bright and dark, for with colours there are many intermediates but with vocal sound there is only one, husky.] (106b4-12)

By the two topics mentioned above, it was proved from one of a pair of contraries that the other is said in many ways. The present, third

one serves to prove both of a pair of contraries homonymous from the things in between the contraries. For since of pairs of contraries some have and some lack a middle term, as Aristotle shows in the *Categories*, and those having one are different from those lacking one, and moreover those which do have middle terms but different ones are themselves different from each other, Aristotle says we should look at the contraries set out,<sup>857</sup> if we then find that some of the things signified by them have and some lack a middle term, we shall say that each of the contraries that we began with is homonymous. For instance bright and dark are contraries, and either of them signifies both the bright or dark in colour and those in sound. We recognize that these are different in species by the fact that the bright and dark in colours have something in between them, but those in sound<sup>858</sup> either have none, or 'if there is one it is husky', which is something different from grey and pale and other things in between contraries in colours. For in general, if some contraries do but others do not have something (in between), and if 'for one there is more than one (intermediate) but for the other just one', or they have entirely different ones, then the contraries among such differences<sup>859</sup> will be homonymous.

**106b13** Again, whether what is opposed by contradiction<sup>860</sup> [is said in more than one way: for if this is, then so will its opposite be. For instance 'not to see' is said in more than one way: one is of not having eyesight, another is of not actively using one's eyesight. But if this is said in more than one way, then seeing too is necessarily said in more than one way, for either of the ways of not seeing will have an opposite: that of not having eyesight will be to have eyesight, that of not actively using it will be to use it actively.] (106b13-20)

After offering us topics for finding homonymous terms on the basis of contraries, Aristotle presents some more, based on things which are opposed in the way of contradictories, saying if 'what is opposed (to something) by contradiction is said in many ways, then so is that thing itself'. For instance if 'not to see' is said in more than one way, then seeing too will be said in more than one way'. And 'not to see' is said in many ways, for it can both mean not having eyesight and not using one's eyesight actively, therefore to see can both mean having eyesight and using it actively. But one should add a subject<sup>861</sup> term to the terms posited, for only then will there be affirmation and negation. And as with seeing and not seeing, so it can be shown for each sense-perception,<sup>862</sup> and for perceiving in general, that the affirmative is said in many ways, since the negative is so too:<sup>863</sup> for <perceiving is said both of having sense-perception and of><sup>864</sup> perceiv-

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ing a sense-object through a sense organ, therefore not to perceive is said in just as many ways. The same things can be said in the case of the things opposed by possession and privation,<sup>865</sup> as Aristotle will say.<sup>866</sup>

This topic is one that things opposed as contradictories share with contraries. Other topics which Aristotle offered for contraries do not suit contradictories, since a negation cannot be opposed as a contradictory to just part of the corresponding affirmation, and even less can we use topics based on intermediates,<sup>867</sup> for things opposed as contradictories lack an intermediate.<sup>868</sup>

**106b21** Further (we have to consider this) in things expressed in terms of<sup>869</sup> privation and possession: [for if one of the two is said in more than one way, then so is the other. For instance if perceiving is said in more than way – as to both soul and body – then being without perception will also be said in more than one way, as to both soul and body. And that the items mentioned are indeed opposed by privation and possession is clear from the fact that living beings are naturally capable of possessing either of these perceptions, both as to soul and as to body.] (106b21-8)

Aristotle proceeds to things opposed by privation and possession,

saying of these too, if ‘one of the two is said in more than one way, then so’ will the other be. Thus if perceiving is said in more than one way, then being without perception, which is a privation of perceiving, will be so too. But perceiving is said to be ‘as to both soul’, since understanding and apprehending by intellect is called perceiving, ‘and body’, i.e. apprehending a sensible object through a sense organ, therefore being without perception too can be said both of the person who fails to understand and of the one who fails to apprehend a sensible thing by a sense organ. Aristotle shows that perceiving and being without perception are indeed opposed as possession and pri-

vation both for body and soul, by saying that ‘a living being possesses either of the perceptions’ mentioned, and if that which is naturally capable of possessing a thing does not possess this thing,<sup>870</sup> it is deprived of it: the reason why not perceiving is not predicated of a wall is that it is not naturally capable of perceiving, or, if it is said not to perceive, then of this subject<sup>871</sup> this is not a statement of privation but a negation. This might be an indication for Aristotle that he had with good reason used this particular example of things opposed by possession and privation.

At the same time Aristotle by this addition shows that throughout all species of opposition when one of the pair is opposed to the other for all the things signified by this other, then this one will itself be

said in many ways. By an addition with this purport he refutes the possible objection, mentioned above,<sup>872</sup> either to the first or to the second topic for contraries, that either of them tends to cancel out the other.

Having spoken of things opposed by possession and privation, Aristotle makes no further mention of things opposed as terms in a relation, because with these it is evident from the very account of things standing in a relation, that necessarily if either of them is said in many ways, so is the other, since for things in a relation their being is the same as their standing in some relation to another thing. This is why since beloved is said in more ways than one, in just as many ways love is said to be love in relation to the beloved. Even more clearly, since knowledge is said in two ways, as potential and as actual, being an object of knowledge is also said in two ways; and so for sense-perception. Furthermore if that which is superior is said in many ways – as to how much,<sup>873</sup> or as to some potential, disposition or activity – what is inferior will be said in just as many ways; and since ‘moved’ is said in many ways – in the categories of quality, of quantity and of where – movement too is said in more ways than one. And if possession is said both of possessor and possessed, then ‘capable of possession’ is also said in many ways.<sup>874</sup>

**106b29** We should further look into things in their case forms. [For if ‘justly’ is said in more ways than one, then so will ‘just’ be, for there will be a ‘just’ corresponding to each ‘justly’. For instance if ‘justly’ is said both of judging by using one’s discretion and of judging as the judgment ought to be, then so will ‘just’ be. In the same way too if healthful is said in more than one way, then so will healthfully be: for instance if ‘healthful’ is in part what is such as to produce health, in part such as to preserve health and in part such as to signify health, then healthfully too will be said of what goes on in such a way as either to produce or to preserve or to signify health. And similarly in other cases too, when a thing is itself said in more than one way (107a1) then so will its case form be, and if its case form is then so will it be itself.] (106b29-107a2)

Case forms they<sup>875</sup> use more generally as a name for inflections and utterances formed in whichever way<sup>876</sup> – as is no longer done nowadays, when we have members of one set, case forms and derivatives, which are held to be comparable with each other yet different. Things are said to be members of one set when they are in the same relation to some other things which may in turn be said to be analogous, such as knowledge and sense-perception: either of these is in the same relation to the things under it: object of perception and object of

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knowledge are said in a similar way, since each of them is in the same relation to the things it consists of.<sup>877</sup> And they<sup>878</sup> also call those things members of one set which are all called after one thing with names similar to it and to each other, as e.g. the just, the just person, and justly<sup>879</sup> are all named after justice, and so evidently all members of one set with each other and with justice itself. But they use ‘named after’ only of the relation of things which have been named after something to this thing they have been named after, not of their relation to each other or of the relation of this thing to them: grammar is not named after the grammarian but the grammarian after grammar.

Case forms in the special sense<sup>880</sup> are things formed after other things in the way of ‘grammatically’, which is a case form of ‘grammatical’, and so with justly, musically, prudently and bravely, which are case forms of just, brave and prudent.<sup>881</sup>

The topic offered is the following: if a case form of a thing is somehow said in more than one way, then so is this thing, and if the thing is, then so is the case form. For instance, since ‘justly’ is a case form of just, therefore if justly is said in more than one way, so is just, and vice versa. But justly is said in more than one way, since the person who has ‘judged by using his discretion’ and asserted what he thinks just, is said to have judged in a just way even if his judgment is not really just; the person who has judged ‘as the judgment ought to be’ is also said to have judged in a just way, and so is the person who has obeyed the law, even if this is not what is just in very truth. So ‘just’ too is said in more than one way, and in just as many ways, i.e. corresponding to each of the uses of justly: thus both what is ‘by 20 using one’s discretion’ and what is ‘as it ought to be’ are just. What is lawful is similar.<sup>882</sup>

We can see that the topic can be converted: if just is said in more than one way, then so is its case form justly. Again, healthfully is a case form of healthy; so if healthy is said in many ways, then so is healthfully. Thus if healthy is said of what ‘is such as to produce’ health, like a drug, to ‘preserve’ it, like a diet, and to ‘signify’ it, like complexion, pulse, good respiration,<sup>883</sup> urine, then healthfully too is ‘in such a way as to produce’ health, as said of getting nursed, ‘as to preserve’ it, as of keeping a healthy diet, and ‘as to signify’ it, as of breathing healthfully. However, it does not follow, if these are said in 105,1  
5 more than one way, that the disposition, health, after which they have been named – being members of one set with it and with each other – must also be said in more than one way: it is not the case that if healthfully is said in many ways, then so is health. So what applies to the case forms does not thereby apply to other members of the set.

After saying ‘if healthy is said in more than one way, then so is the 10 case form (derived) from it’,<sup>884</sup> Aristotle says it will be so ‘in other cases

too': for it does not apply only to the examples mentioned, that if a thing's case form is said in more than one way, <then so is the thing itself>, as he said at the beginning of his presentation of the topic, and the other way round that, if the thing itself is said in more than one way, then so is its case form. Here 'things themselves' are things like just, healthy, musical and brave, and case forms of them are bravely, justly, healthfully and musically. So no matter which of the two it is whose ambiguity is clear, from this one it can be shown that the other one is ambiguous too.

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**107a3** See also whether the kinds of the predication corresponding to the name are the same in all instances: [for if they are not, it is plain that what is said is homonymous. For instance 'good' in food is what is such as to produce pleasure but in medicine what is such as to produce health, and with the soul it is its being such-and-such, for instance sane or brave or just, and similarly as applied to human being. Sometimes on the other hand it is the moment,<sup>885</sup> as for instance that [good]<sup>886</sup> which comes at the right opportunity, for 'good' is used of what comes at the right opportunity. And often it is the quantity, as for instance with what is according to measure, for what is according to measure is also called good. So 'good' is homonymous. And 'bright' too in the same way in a body is colour but in vocal sound is its being easy to hear. And in nearly the same way 'sharp', for it is not the same thing that is called sharp in the same way in all cases: a sharp vocal sound is one which is quick, as the students of arithmetical harmonics say, but a sharp angle is one which is less than a right angle, and a sharp knife is one which has a sharp edge.] (107a3-17)

Aristotle says we should also inspect the kinds of predication under which things under the same name fall, i.e. the categories, which are the highest genera. What he says we should inspect is whether the same predication are made of all the things meant by the name at issue; for if the things meant by this name fall under more than one category, and so more than one category is predicated of it, it will be homonymous, as with 'good.' For good, Aristotle says, sometimes signifies the category of acting and making: some things are good as producing<sup>887</sup> good, since what produces good is said to be good itself, as for instance what produces health, or pleasure, and in general what is beneficial: thus what is good 'in food' is good as producing good, and what produces comes under the category of acting and making. But sometimes good signifies the category of what kind of,<sup>888</sup> as 'with the soul', for when we predicate good of the soul by calling it good, we signify its being of a certain kind and quality, 'as for instance sane or

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brave or just', and things are of a certain kind and quality by the presence of quality, so that if the soul is of a certain kind and quality by the presence<sup>889</sup> of these things, then these things are qualities. Similarly when we predicate good of persons, we signify their being of a certain kind and quality: sane, brave, just, prudent.

5 Sometimes good signifies the category of when,<sup>890</sup> since what occurs at the appropriate moment is called good. Sometimes it signifies the category of how much,<sup>891</sup> for what is according to measure, neither excessive nor deficient, would be the quantity according to which a thing is called thus.<sup>892</sup> Things are also called good as a substance, as god and mind are; and as in relation to something, since this is how that which is proportionate<sup>893</sup> is good. There is also good in the 10 category of being acted upon, as being nursed and being taught. Some of the good is in the category of where,<sup>894</sup> as e.g. being in Greece, in wholesome places, or where peace and quiet prevail. Some good seems to be in the category of position, as when that for which it is better to be seated is seated, and that for which it is better to recline, as it is e.g. for someone in a fever, is reclining. So since the ten kinds<sup>895</sup> are 15 predicated of the good,<sup>896</sup> we can see that 'good is homonymous'.

In the same way 'bright too' can be proved homonymous: that<sup>897</sup> said of the body signifies a bright colour, which comes under quality, but that said of vocal sound signifies the category of acting upon, since a voice which is easy to hear is called bright, and this is the one that alters the hearing vehemently and rapidly. And so can 'sharp', since 20 not all that it is predicated of comes under the same kind:<sup>898</sup> sharpness in vocal sound comes under the category of acting upon, if it is the rapid voice that is sharp, since its impact<sup>899</sup> and sound cuts up and divides the air rapidly because its own movement is rapid. For 'the

25 students of arithmetical harmonics' – the students of harmony being the Pythagoreans most versed in mathematics, and those of arithmetical harmonics being the ones who generate the harmonies by a putting together of numbers, since they reduce everything, including the harmonies, to numbers – these claim that sounds, and vocal sounds among them, arise from an impact on air and the resulting movement of this air. When this movement is rapid – which it is by the vehemence of the impact – the sound is high<sup>900</sup> in a particular 30 numerical<sup>901</sup> proportion to this movement; but if the movement is slow, the sound is flat, just as,<sup>902</sup> when the movement of air which occurs is compact and massive, the sound is loud and vehement, but when the movement is calm and little, the sound too is quiet and soft.

107,1 5 So if setting the air in rapid motion is an acting upon, and vocal sound is high-pitched by such a rapid motion of the air, then high pitch is in the category of acting upon. On the other hand sharp of an angle connotes a relation, since less-than is in the category of relation: it means less than some other thing, and a sharp angle is one that is

less than a right angle. In the case of a knife sharp indicates a quality, since shape comes under quality and a knife is sharp in shape.<sup>903</sup> And sharp-angled too signifies shape. So if part of sharp comes under the category of acting upon, another part under relation and yet another under quality, then sharp is homonymous.

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**107a18** See also whether the genera of the things coming under the same name are different and not under one another.<sup>904</sup> [For instance the animal and the piece of equipment called mule, for they have a different definition corresponding to their name: the one will be said to be a living being of a certain kind, the other a piece of equipment of a certain kind. But if the genera come one under the other, the definitions are not necessarily different. For instance crow has living being and bird as its genus; so when we say that the crow is a bird, we also say that it is a living being of a certain kind, so that both genera are predicated of it, and similarly when we call the crow a biped winged living being, we are saying that it is a bird, so in this way too both genera are predicated of the crow[, and so is their definition].<sup>905</sup> This is not what happens with genera which do not come under one another, for when we call something a piece of equipment we do not call it a living being and when we call it a living being we do not call it a piece of equipment.] (107a18-31)

To the preceding topic, taken from the genera, Aristotle adds one which is also taken from genera, yet is not the same as the earlier one: that one was from the highest genera, which Aristotle calls categories, but the present one is, taken universally,<sup>906</sup> whether<sup>907</sup> things signified by a name are under different genera which are 'not under one another'. For if they are, the name<sup>908</sup> will be said in many ways, since not only things<sup>909</sup> under different categories are homonymous, but if things signified by the name are under one category, but with each of them under a different genus, and also these genera not under each other, then these are homonymous too. For Aristotle says we should look at the genera of the things under the same name, i.e. in which genera things signified by the same name fall, and then if their genera are different and not under each other, we should regard the name which signifies these things as homonymous. For if the things of which the name holds true<sup>910</sup> are in more than one genus, but these genera are under each other, this name is not necessarily said in many ways. Thus that of which the name crow is predicated is both under bird and under animal as its genus, and this does not make the name crow homonymous, since the person who says<sup>911</sup> bird also says<sup>912</sup> animal, and again the person who says two-footed winged animal says bird, which is why both genera are predicated of the same

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thing. With ‘mule’, however, the things of which it holds true are under animal and equipment<sup>913</sup> as their genera, and these are not under each other: they share one common genus and one common category, substance, but because the proximate genera of the things signified by mule are different and not under each other, the name  
 108,1  
 5 mule is homonymous; the person who says<sup>914</sup> equipment does not also say animal, nor does the person who says animal also say equipment, so they are not under each other. Crow too will be under different genera when it is not taken as said of the animal alone: in part under the genus animal, in part under equipment.<sup>915</sup>

10 **107a32** And see whether the genera are different<sup>916</sup> and not under each other not just for the thing at issue [but also for its contrary: for if its contrary is said in many ways then it is plain that the thing at issue is so too.] (107a32-5)

Aristotle says we should inquire ‘not just for the thing at issue’ whether the things signified by it belong to different genera which are not under each other, but also, if the thing in question has a contrary, perform on this contrary the same search whether the things under it belong to different genera which are not under each other. Thus it might be shown that this contrary is said in many ways,  
 15 and if it is, then it has been proved that the thing with which we started is also equivocal, because we had previously posited<sup>916a</sup> that if a thing’s contrary is said in many ways, then so is the thing itself. For if it is inquired whether dull is said in many ways, then by taking its contrary sharp, and showing that the things of which sharp is  
 20 predicated are in different genera which are not under each other – one in vocal sound, another in taste, yet another in knife, their<sup>917</sup> genera being sound, taste, and shape (for shape is the genus of the sharpness that is in a knife),<sup>918</sup> which are not under each other – thus we have proved that dull too is equivocal, since part of it will be in  
 25 voice and sound, part in taste and part in knife and shape: for contraries are held to be in the same genus.

**107a36** It is also useful to look at the definition which arises from the combination [*<of two things>*, as for instance of a bright body and bright vocal sound, for here when what is peculiar to each is removed then the same definition should be left.<sup>919</sup> But this is not what happens with homonymous terms, as with those just mentioned: for the one will be a body having a colour such as this, the other a vocal sound that is easy to hear; if, then, ‘body’ and ‘vocal sound’ are removed, what is left is not the same in either; but that is what it should have been if the ‘bright’ said

in each case were synonymous.

Often, too, the homonymy is lurking in the definitions themselves, which is why we have to look into the accounts as well. For instance if someone says that what is of the right measure [with respect to health]<sup>920</sup> is what is such as to signify and to produce health, one should not give up but should look at what the other has called ‘of the right measure’ in either case,<sup>921</sup> as for instance whether he has called thus on the one hand being of such a quantity as to produce health and on the other hand being of such a quality as to signify what the subject’s disposition is.] (107a36-b12)

The topic which Aristotle here offers is this. When a name is predicated of more than one thing, but it is unclear whether this common name applies to these things homonymously<sup>922</sup> or univocally, Aristotle says we should take each of the things of which it is predicated and define it together with their common name, and then from these definitions of the composite subtract the peculiar account of each of the things we had added to the common name, and see whether the account we are left with is the same in both<sup>923</sup> cases: if it is, then the name we are inquiring into is not equivocal, but if the account is not the same, then the name is equivocal.

And Aristotle claims that we should take the account of the combination in order to grasp what is peculiar to each of the things of which the thing said in many ways holds. Thus *human*<sup>924</sup> is predicated of both male and female; so if we inquire whether it is predicated homonymously of them, we take the account of each of them together with *human*: of male *human* and of female *human*. That of the one is ‘two-footed terrestrial living being, capable of begetting in another,’ that of the other ‘two-footed terrestrial living being, in which another is capable of begetting’. Now since if we subtract<sup>925</sup> from these the peculiar properties of male and female – i.e. being capable of begetting in another and that in which another is capable of begetting,<sup>926</sup> – the ‘two-footed terrestrial living being’ which remains is the same in both, and this was the account of *human* being, therefore *human* being is not said in many ways, since it appears that the account of what is common to both is one. On the other hand if, after subtracting from the composite accounts the peculiar properties we had first added, what is left is not the same, then the common element is said in many ways. Thus ‘bright’ is predicated both of body and of vocal sound; if we now offer a definition of a bright body and of bright vocal sound, subtract the account peculiar to body and to vocal sound, and then find that the account we are left with, that of bright, is not the same in both cases, then bright is homonymous. Now of a bright body the account is ‘magni-

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tude having three dimensions which has a colour that distends eyesight',<sup>927</sup> of a bright voice 'sound of an animate being, produced through the vocal organs in an impulse, and easy to hear'; if we subtract from these accounts 'sound of an animate being, produced through the vocal organs in an impulse', which is peculiar to voice, and 'magnitude having three dimensions', which denotes body, then what is left to denote the brightness in both is in the one case 'which has a colour that makes eyesight discriminating' and in the other 'easy to hear', and since these are not the same, therefore bright is homonymous.

110,1 'Often, too', says Aristotle, 'the homonymy is lurking in the accounts' and determinations 'themselves' which are obtained<sup>928</sup> either of the compounds<sup>929</sup> or in general of the things of which we inquire whether they are said in many ways, so that it is not manifest that the thing in question is said in many ways. This is why we should not

5 desist, but investigate again what, of the common account in the definition, is the peculiar property<sup>930</sup> for this is how the difference between such uses will be found. E.g. since 'healthy' is used both for 'such as to produce' and for 'such as to signify' health,<sup>931</sup> if someone who wants to use the above topic defines both of the composites,<sup>932</sup> healthy as producing and as signifying health, by offering the ac-

10 counts 'what is proportionate for producing health' and 'what is proportionate for signifying health' respectively, then, since after subtracting from these accounts the properties peculiar to each, i.e. 'for producing health' from the account of healthy as productive of health and 'for signifying health' from that of healthy as a sign of health, what we are left with – i.e. that proportionateness which was the account of healthy itself<sup>933</sup> – is the same in both, therefore healthy

15 will not be held to be homonymous but univocal, given that its account is one and the same.<sup>934</sup> So, Aristotle says, we should in turn inquire what 'being proportionate' signifies in each of the two, for this is how we shall find out that healthy is homonymous. For in healthy as productive, it signifies how much,<sup>935</sup> since what produces health is quantitative proportion – this is the kind of proportion in which

20 healthy as productive resides – but in healthy as a sign what is proportionate<sup>936</sup> no longer signifies this much but this kind, so as to signify that the subject's disposition is of this kind. So if we take the definitions of the things signified by proportionate<sup>937</sup> with the definition of proportionate itself, and then subtract the properties peculiar to the things signified, what is left is not the definition of proportionate:<sup>938</sup> and if it is granted that this much and this kind are different, then healthy is homonymous.

In the same way we can find out that movement is homonymous, even though it is held to have a single account, since it is said to be 'activity of that which is capable of being moved as capable of being

moved'. But since what is capable of being moved is not even the same for every movement, but is different for each kind – for one kind it is what is capable of change in substance, for another what is capable of change in quality, for a third what is capable of a change in how much, as the activity makes clear: for things which differ in species have a different completion (and perfection), and what is potentially in motion is different in species for each of the kinds of object capable of being moved, which is why their activity and actuality are different too: locomotion is one of them, alteration is another one, increasing a third and decreasing a fourth, coming-to-be a fifth and passing away a sixth one, so movement is obviously homonymous.

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**107b13** Further <one should see> whether they are not comparable as to more and less or equally, [as for instance a bright vocal sound and a bright coat, and a sharp taste and a sharp vocal sound; for these things are not called bright or sharp in the same way, nor the one more than the other, and so 'bright' and 'sharp' are homonymous; for all that is synonymous is comparable, since with any two such things the one will be said to be so-and-so either as much as the other or more than the other.] (107b13-18)

This topic from comparison is another one offered by Aristotle for judging and finding<sup>939</sup> things said in many ways. For since all the things which share the same account and species can be juxtaposed and compared<sup>940</sup> – for all things which partake of one and the same thing either have a similar part in it, and so are comparable in that respect in which they are similar, in the way that e.g. circles all resemble each other in being circles and answering to the account of the circle, and similarly humans, and in general things which do not admit of a greater and lesser degree, have a similar part in what is common to them, and are comparable in respect of their similarity, whereas things which do admit of degrees are capable of being compared both in that respect in which they are similar and with respect to degree, as with 'bright': things which partake of bright as colour either all have a similar part in it, or one has a greater part than the other, and those which have a similar part are at the same time comparable with respect to degree – seeing, then, that things which partake of the same are comparable, we can see that things which are not comparable can never partake of the same.<sup>941</sup>

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So Aristotle says we should look at things signified by one name and see whether these are each of them comparable as to what is signified by this name: if they are not, then this name – which they share without being comparable with respect to what it is the name of – will be homonymous. Thus 'bright' is predicated both of vocal

25 sound and of a piece of clothing, yet voice and dress are not comparable as to their brightness: no one would inquire what is brighter, this dress or that sound, as they would of chalk and snow, since they are neither equally bright nor is one of them more so than the other, and so because bright does not signify the same thing in both cases, it would seem to be homonymous, whereas bright as said of chalk and  
 112,1 snow is not. Again, ‘sharp’ is predicated both of taste and of vocal sound, which are not comparable insofar as they are sharp, so ‘sharp’ is homonymous.

**107b19** And since, if genera are different and not subordinate one to the other, differences of them<sup>942</sup> are different in species, [as for instance of living being and of knowledge – for these have different differences – <we have to see> whether the things falling under the same name make up differences of different genera which do not come under one another, as for instance sharpness of vocal sound and of bodily mass: for one vocal sound differs from another in being sharp, and one bodily mass differs from another also in being sharp; consequently ‘sharp’ is homonymous, for these are differences of different genera which do not come under one another.] (107b19-26)

In the *Categories*, Aristotle says that ‘if genera are different and not subordinate one to the other, differences of them are in different species’.<sup>943</sup> This is the basis for another topic he offers us for finding things said in many ways:<sup>944</sup> if a name is predicated of several things, and these things make up differences of different genera which are not under each other, then the name signifying these things will be homonymous. For by the fact that they make up differences of different genera, they will also be different in species, since ‘if genera are different and not subordinate one to the other, differences of them are in different species’. For this reason sharp is homonymous, because sharpness is a difference both of voice and of mass, which are different genera not under each other.

15 One might inquire how this claim is true in all cases. For ‘two-footed’ is held to be a difference both of terrestrial animal and of winged animal, which are different genera not under each other, yet two-footed is not homonymous. Actually the present (topic) should be applied to genera which are different from each other in every way and not placed under one genus, as is the case with those of which  
 20 Aristotle himself gives this account: animal and knowledge, and voice and mass, differ in just this way, whereas the previous examples, terrestrial and winged, though not under each other, are still under one common genus, animal. This is why the difference ‘two-footed’ would seem to be a difference of the genus animal as much as it is of

either of these, and so, remaining within one genus, would seem to be one and the same in species.

**107b27** Again, <we have to see> whether things which themselves come under the same name have different differences,<sup>945</sup> as for instance colour [in bodies and in songs: for of that in bodies one difference is that between what distends and what contracts the eyesight, but colour in songs does not have the same differences. Consequently colour is homonymous, since if things are the same then so are their differences.] (107b27-32)

After showing<sup>946</sup> that the name of differences is said in many ways by the fact that<sup>947</sup> the things signified by it are differences of different genera, Aristotle shows that the name of the genera in turn is said in many ways if the things signified by it have different differences. For not only when the things signified by a name are differences 'of different genera not subordinate one to the other' does Aristotle say the name signifying them is homonymous, but when the genera signified by a name themselves have different differences, then too he says the name signifying them is homonymous; which is plausible, for if different genera have different differences, then those which have different differences are different genera.<sup>948</sup> Thus 'colour' signifies both that in bodies, such as bright, dark and what is in between, and that in song, for there is something called colour in music too: students of harmony<sup>949</sup> say that melody has three parts, harmony, colour, and diatonic scale, and they say the differences of colour, which they severally call colours, are soft colour, two-third tone colour and one-tone colour.<sup>950</sup> So since the differences of colour in bodies, such as that which distends and that which compresses eyesight,<sup>951</sup> are different from those in song, i.e. half-tone, quarter-tone and soft colour, therefore bright is homonymous,<sup>952</sup> for if one thing only were signified by it, it would not comprise differences which differ in species, since genera which are the same have differences that are the same.

**107b33** Further, since the species is not a difference of anything, [<we have to> see whether of things which come under the same name one is a species and the other a difference, as for instance the brightness in a body is a species of colour, but that in vocal sound is a difference, for one vocal sound differs from another in being bright.] (107b33-7)

Aristotle says we should also inspect whether, of things signified by the same name, one is a species of something and the other a difference. For if a name signifies these, it is homonymous, since the

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species of a thing cannot be a difference of a thing: one of these, difference, is what produces a species, and the other, species, is what is produced by the first;<sup>953</sup> also the one, species, is predicated in the category of what a thing is, the other in that of what kind of thing it is; the species is the same thing which the genus is, whereas the  
 25 difference is of the genus but not the same as the genus; and species are things into which genera are divided, differences are things according to which genera are divided or, in other words, according to which species differ from each other. 'Light' is obviously homonymous for the reason that one part of what it signifies is a species, since brightness in colour is a species of colour, and another part is a difference, since brightness in vocal sound is not a species but a  
 30 difference of vocal sound: one vocal sound differs from another by either being or not being bright.

### <1.16 Discerning differences>

114,1      **107b38** So things said in many ways have to be considered by these and similar means. (107b38-9)

After presenting the principal topics through which one may recognize things said in many ways and homonymously, Aristotle says 'by these and similar means', because certain other ways to find things

5      said in many ways can be found besides the topics mentioned. Thus one may recognize that a thing is said homonymously by the fact that one of the things it signifies is a species and another an individual, as with 'Man', which was also the proper name of the Olympic prize-winning fist-fighter whom Aristotle mentions in the *Ethics*.<sup>954</sup>

10      Similarly the name<sup>955</sup> 'Crow' signifies<sup>956</sup> not only a species of bird but also the orator.<sup>957</sup> A name which signifies the common genus as well as one of the species under this, is also homonymous, such as the distinctive property, for this signifies both this property as opposed to the genus, distinguished from what is common to all of it,<sup>958</sup> and the common genus – which in its turn is predicated both of this so-called property and of the definition.<sup>959</sup> 'Justice', which signifies

15      both virtue in general and the particular virtue called justice in contradistinction with other virtues, is also homonymous. So is 'black', since not only that which is contradistinguished to the colour white, but also and in particular the ink with which we write is called 'black'.<sup>960</sup> The fact that a thing is said in many ways may also be obtained from its relations, as was said above<sup>961</sup> – this too not mentioned by Aristotle. And what signifies things which are judged

20      by different senses is also homonymous, as we said in the case of colour, one part of which is judged by eyesight and another part by

hearing. Actually this is mentioned by Aristotle. So he has expressed himself in this way on account of cases such as these.

**107b39** The differences we must study both within the genera themselves, (108a1) comparing them<sup>962</sup> to each other, [as for instance by what justice differs from courage and good sense from soundness of mind – for these are all from the same genus – and from one genus to another of things not too wide apart, as for instance by what sense-perception <differs> from scientific knowledge. For with things wide apart the differences are altogether plain to see.] (107b39-108a6)

The third species of instruments that were supposed to help towards the supply of dialectical arguments, was discerning the differences within each genus,<sup>963</sup> which is the subject of Aristotle's present account. Recognizing differences is useful, as he will say, for problems about sameness – for if we can recognize differences between the things in question, we can show that these things are not the same, as e.g. opinion and knowledge, or sense-perception and knowledge, or self-control and sanity, but also that virtue is not an art. It is also useful for dividing genera into species, since finding the differences of<sup>964</sup> things within the same genus is equivalent to being supplied with the dividing of these things<sup>965</sup> into species; for objections to inductive arguments: if we know what it is in which the thing that is being obtained is different, we can raise the objection against the person who is making an inductive inference that he is trying to obtain cases which are not alike; and for objections to suppositions of one of the philosophers of nature, as e.g. that what is, is one, as Parmenides and Melissus believed, since we can deny this opinion if we have a comprehensive view of the differences among the things which come under that which is. Discerning differences is also useful for discerning whether there are many moral virtues differing in species or whether all the so-called virtues put together make up virtue as one whole; and also for definitions, given that a definition consists of a genus and differences.<sup>966</sup> As I said before,<sup>967</sup> Aristotle himself will say<sup>968</sup> what is the use of each of the above instruments. However, when speaking of the differences he does not offer topics through which we will discern them, as he has done both for propositions and for dividing homonyms,<sup>969</sup> but merely lays down<sup>970</sup> what are the things in which we should look for differences, and concerning which we should train ourselves for an easier discerning of differences within each subject:<sup>971</sup> he says we should look for differences not of things which are wide apart,<sup>972</sup> since between such things the difference is clear<sup>973</sup> – no one would inquire in what human being differs from wood – but in things which are near to each other, and which we might

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mistakenly regard as the same; as e.g. in things which come under the same genus, since the differences of things near to each other in this way are not obvious – this is the sense of ‘within the genera themselves’, which Aristotle says instead of ‘in things which come under the same genus’, and it is the differences of these which are differences taking the word in the strict sense – and we should also look for differences in things which are in different genera and yet not wide apart from each other. In general Aristotle claims that we should look for differences in things which are the same in some respect, whether in genus or by analogy. For it is not easy to separate by their differences things which are reckoned to be the same, and when training we should train ourselves in what is harder, since the transition from what is harder to what is easier is itself easy. Thus one might inquire what is the difference between chance and that which happens spontaneously, between movement and on the other hand coming-to-be and passing away, between self-control and sanity or between dissoluteness and lack of self-control, between bestiality and wickedness, and between distinctive property and definition.

Aristotle gives as his own example of things of the same genus justice and courage as coming under the one genus of virtue, when he asks ‘by what justice differs from courage?’ – and similarly each of the other virtues – as e.g. that courage is a mean in one way and justice in another: the one is the mean between the two evils of rashness and cowardice, the other between those of which injustice consists, i.e. striving for more than one’s due and being contented with less than it, since injustice has its being in either of these. And that courage concerns one (class) of objects, which is outfacing dangers, but justice another, which is equality of distribution and in transactions.<sup>974</sup>

As an example of things not of the same genus yet not wide apart, he uses sense-perception and knowledge, which differ in genus – that of knowledge is supposition, and sense-perception is not supposition – yet are the same by analogy: knowledge is to its objects as sense-perception is to sensible objects, both of them being faculties of judgment; at least there have been those who on account of the similarity between them said knowledge and sense-perception are the same. But they are different: sense-perception also<sup>975</sup> concerns things which are capable of being different from the way they are,<sup>976</sup> whereas knowledge has no such objects; also knowledge is capable of discerning the essence of each of its objects whereas sense-perception cannot discern that of any of its objects; knowledge is acquired, whereas the other is there from the outset; one is shared by other living beings, the other is peculiar to humans or to rational beings in general; one comes by nature, the other by instruction; with sense-perception the disposition brings along the activities – it is because we had vision that we began to see – but the dispositions characteristic of the several

branches of knowledge are acquired through the corresponding activities: we become literate by being active in the field of letters. Also, if sense-perception is destroyed then so, together with it, is the living being, since a living being cannot do without touch, but destroying knowledge does not destroy its possessor. Further, with knowledge you can lose it and win it back again, but with sense-perception you cannot; the one is separate from speech-and-reason but the other has its being in this; sense-perception is only of things present, knowledge is of things past, present and future. Further, knowledge has its starting-point in sense-perception, sense-perception not in knowledge, since from sense-perception arises memory, and from memory experience, which is the starting-point for knowledge. – It seems that Aristotle is here speaking of the difference by which one thing differs from another in general, not just that by which the division of genera into species proceeds,<sup>977</sup> for then he would not have claimed that we should also investigate differences between things which are not of the same genus.

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### <1.17 Observing similarities>

**108a7** Similarity should be considered both with things in different genera: [as one of a pair of things is to the other, so a third thing is to a fourth, for instance as scientific knowledge is to the object known, so sense-perception is to the object perceived, and also: as one of a pair of things is in the other, so a third is in a fourth, for instance as eyesight is in an eye, so is intellect in a soul, and as calm is in a sea, so lack of wind is in air; but most of all we have to train ourselves <in considering it> in things wide apart, for then we shall easily be able to get a view of the similarities in the remaining things. One should also consider things which are in the same genus and see whether there is one thing that holds identically of all of them, as for instance of human being, horse and dog; for to the extent that one thing holds of these identically, to that extent are they similar.] (108a7-17)

One of the four instruments put forward by Aristotle as useful for the finding and supply of dialectical arguments is still left: the discerning of similarity. Aristotle says we should carry out the search for similarity in the opposite way to that for differences: he postulated<sup>978</sup> that we should try to recognize the differences in similar things, since this is harder and these are subjects of dispute as to whether or not they do differ, as e.g. what is the difference between a pigeon and a dove, between a dog and a wolf, between dissoluteness and lack of self-control, between sanity and self-control or between liberality and

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magnificence, since between things which are clearly apart the differences are clear to all. Similarity on the other hand is harder to get in view ‘in things wide apart’, since no one would inquire whether one egg is similar to another, or an ass to a mule, or Castor to Pollux, but they might inquire whether Achilles is similar to Thersites, human

15 being to horse, or sense-perception to knowledge. So he says we should ‘train ourselves’ in recognizing similarity ‘in things wide apart’ which differ in genus. Thus his claim in both cases is equivalent to that of rhetoricians, that ‘one should express what is general in a way peculiar to the subject, and what is peculiar to it in a way that applies more generally’,<sup>979</sup> since the person who postulates that one should express what is general in a way peculiar to the subject, is postulating that one should find differences in things which are of the same genus  
 20 and general,<sup>980</sup> and on the other hand the person who postulates that one should express what is peculiar to a subject in a general way postulates that one should make his opponent concede similarities.

Aristotle says we should search for similarity in different genera in two ways: either we should take something that is in a relation to certain other things which are of the same genus with each other, and inquire what<sup>981</sup> is in this same relation to other things also belonging to one genus with each other but not with the previous ones; for if this is found then these things are similar to each other by analogy while being in different genera. For instance since knowledge is in such a relation to the thing known that it is capable of recognizing contraries, we should look for something else, not of the same genus as knowledge, which is in the same relation to what falls under it, as knowledge is to things known: then what we find will be similar to the thing we began with by analogy. So since sense-perception itself is to things

25 30 perceived by the senses as knowledge is to things known, therefore sense-perception and knowledge are similar by analogy. That they are nevertheless different genera, can be seen from the fact that they have different species. They can also be shown to fall under different genera insofar as sense-perception comes under things which are by nature, whereas knowledge does not come by nature but by instruction.<sup>982</sup> Again, since sense-perception is to opinion as understanding  
 118,1 5 is to knowledge – i.e. as its starting-point – therefore understanding and sense-perception are similar. And since expedient is to good as pleasant is to pleasure – it is what produces it – therefore pleasant and expedient are similar.

This is what the search for similarity among things of different genus in their relation to other things is like. Aristotle lays down another starting-point for the search for similarity in different genera: when we take some genus<sup>983</sup> as being in some other and inquire what other thing is in another genus in the same way. E.g. since as ‘eyesight is in an eye’, so ‘is intellect in a soul’ – for in either case it is

in it as the principal thing which occurs in them – in this respect understanding and eyesight are similar. Again if health is in body as virtue is in soul – i.e. as completions (and perfections) of their subjects<sup>984</sup> – then virtue and health are similar. And since stillness of wind is in the air as calmness is in the sea – they are a calm of their subjects – therefore stillness of wind and calmness are similar. In the same way justice is similar to beauty: either of them resides in a proportional<sup>985</sup> equality, beauty in that of the parts and limbs of the body, justice in distribution and in transactions involving the things distributed.

This is how similarity by analogy in different genera is found. But Aristotle says one should also investigate things which are of the same genus but of different species, and inquire what it is that holds identically of all of them, since they will be similar in this common thing even though they are of different species. He tells us how we should carry out this search: if one thing holds identically of a number of things in the same genus but differing in species, then these things are similar to each other with respect to that thing. Thus 'human being, horse and dog' have in common that they live on land, and for this reason are similar in this respect. What human, crow and fish have in common is their capacity for sense-perception; what is shared among fishes by all those which have gills and among winged animals by insects is that they do not have lungs; by cattle, deer, sheep and goat that they do not have incisor-teeth in both jaws. Again among trees by plane, vine and fig-tree that their leaves are broad and thin, which is why they shed them; by olive, myrtle and bay that their leaves are thick and narrow, which is why they are evergreens.

### <1.18 The instruments evaluated>

**108a18** To have considered in how many ways <a thing is said>, is useful with a view to distinctness, [for one will know better what it is that someone<sup>986</sup> is laying down once it has been brought to light in how many ways it is said, and with a view to the syllogisms bearing on the thing itself and not on its name. For if it is unclear in how many ways this is said, it is possible that the answerer and the questioner do not bring their thought to bear on the same thing, but once it has been brought to light in how many ways the name is said and what the person who answers affirmatively is applying it to,<sup>987</sup> the questioner would make himself ridiculous if he directed his argument at anything else.

It is also useful for not being trapped in fallacies, and for trapping others in these oneself. For if we have noticed<sup>988</sup> in how

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many ways something is said, we are in no danger of being trapped in fallacies but will notice if the questioner does not direct his argument at the same thing, and when we ourselves do the questioning we shall be able to trap the answerer in a fallacy if it happens that he has not noticed in how many ways <the thing in question> is said. This is not possible in all cases, but <it is> when of the things said in many ways<sup>989</sup> some are true, some false. This manner does not properly belong to dialectic, which is why dialecticians have to beware of<sup>990</sup> this kind of dialectical arguing with a view to a thing's name, unless one is quite incapable of arguing dialectically about the point at issue in any other way.] (108a18-37)

After speaking of each of the four things which he said are instruments for the supply of dialectical arguments and syllogisms,

5 Aristotle duly shows what each of them contributes to these and in what respect they are said to be instruments. He omits to mention how useful the collection and preparation of premisses is for being supplied with syllogisms, since this is well-known:<sup>991</sup> premisses are the parts<sup>992</sup> and the matter<sup>993</sup> of syllogisms, since syllogisms consist of premisses, and it is clear that a supply and provision of the latter will provide a supply of syllogisms. But he does say what each of the other instruments is useful for.

10 First he discusses the dividing of things said in many ways, saying that this is useful 'with a view to distinctness', because what is posited as the subject towards which we should direct our arguments becomes distinct by being determined, and its distinctness is useful with a view to our syllogisms directed towards it: it is easier to be supplied with arguments appropriate to the thing in question if we know distinctly what it is and are not led astray by duplicity of meaning. In general distinctness is useful both for establishing and for refuting things; at any rate if the opinion of Parmenides and Melissus, that what is is one, has become obscure, this is because they did not distinguish 'in how many ways' that which is 'is said'.

15 20 By 'for one will know better what it is that someone is laying down' Aristotle would seem to refer to the respondent, the person who concedes the propositions, since these concede more easily what is asked when it is well known in how many ways the subject of the question is said and they recognize in what respect they concede the point.

25 A second use served by the dividing of things said in many ways which Aristotle sets out, is with a view to syllogisms and arguments bearing 'on the thing' in question 'itself', directed to and concerning this, 'and not on its name' and wording, since these would not be dialectical but sophistical arguments. 'For if it is unclear in how many

ways' the thing in question 'is said', it may be that the questioner and the respondent bring their thought to bear on different things signified by this name, and in this way arguments may come to be merely directed at the name, and not about the thing. But once it has been defined and come to be known as to which of the things signified by the wording the respondent affirms what he affirms,<sup>994</sup> the questioner makes himself ridiculous if he still directs his questions and arguments<sup>995</sup> to any other thing signified by the name rather than to the one in question.

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For when it is posited without qualification that knowledge is not separated from the soul, one can syllogize in dialectical argument that every soul has the knowledge that it has for all time, since if knowledge is inseparable from the soul, and what is inseparable is so from something which is itself inseparable from it, then the soul is also inseparable from knowledge, and if this is so then knowledge would seem to be innate in the soul. However, once 'inseparable' is determined,<sup>996</sup> so that some things are inseparable in the way of things which are in the essence of any thing, others in the sense that they are unable to subsist on their own, so that for them not to be together with what they are inseparable from is to perish – and these include knowledge and everything else that is in a subject – then we can no longer prove that knowledge is innate in the soul and is in its essence by the fact that it is inseparable from it. – It seems that the first part of what Aristotle says is about those who respond, the second about those who question and syllogize.<sup>997</sup>

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Aristotle says discerning things said in many ways is 'also useful for not being trapped in fallacies', since if one knows how many meanings that which is said has, he does not concede propositions put to him in question form in any other sense than the one in which he himself answers affirmatively.<sup>998</sup> Thus if the person who affirms that wealth is good knows that good is homonymous, he will not make a concession to the person who says that what is good makes people good, since the good by which people are good is not that which is good as a possession or as a potential, whereas wealth is something good as a possession and as a potential.

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Aristotle says discerning things said in many ways is useful 'also for trapping' someone 'in a fallacy' if one so wishes, since by knowing the meanings of the word in question, and shifting the argument to another one on which what the respondent says is not true, one may mislead him<sup>999</sup> and trap him in a fallacy, e.g. if one person says that those learn who do not know, and the other shows that those are learners who are literate, i.e. people who do know and have knowledge; or if the one concedes that the person who is in motion changes in place, and the other makes him concede that the person who is

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altered is in motion, and then deduces that the person who is altered changes in place.

Aristotle adds in which cases it will be possible to produce a fallacy by what is said in many ways: in those where what is said holds of one of the things meant but not of the other. For if what is said either holds of all or holds of none of the things meant by the name, it is useless to shift from one of these things to another. That 'Ajax took part in the expedition to Troy' is true for both Ajaxes, so no fallacy ensues whether it is transferred to one or the other; on the other hand that 'Ajax engaged Hector in single combat' is not true of both, so if it is affirmed that 'Ajax engaged Hector in single combat,' and someone shifts to Ajax the son of Oelesus, examines whether Ajax is not the son of Oileus, and having obtained that this is so co-assumes that the latter has not engaged Hector in single combat, then he can trap the person who affirmed that Ajax did engage Hector in single combat in the fallacy of inferring that he made a false claim. And so with 'The masculine has masculinity', since one of the things meant by 'masculine' does and the other does not have what is predicated;<sup>1000</sup> and the same with the person who is in motion changing in place.

But Aristotle says that the fallacy by what is said in many ways is not appropriate to dialectic, since it is superficial and sophistical, and for this reason he says we should beware of arguing dialectically to this purpose when training ourselves, if we are at all able to syllogize 'about the point at issue' in any other way. For it is in no way dialectical to obtain that 'What you say goes through your mouth', in the sense in which the things said are the words, and then to transfer the claim to the chariot as the thing which is said.<sup>1001</sup>

It is clear how dividing things said in many ways is useful: if the things mentioned are useful for arguing dialectically, and these things depend on dividing things said in many ways, then such division is useful for dialectical arguments.

**108a37** Finding the differences is useful both for syllogisms about same-as and other-than and for recognizing (108b1) what each thing is. [That it is useful for syllogisms about same-as and other-than is plain, for if we have found any difference of the things at issue whatever, we will have shown that they are not the same; and <that they are useful> for recognizing what <a> thing is, <is plain> because it is by the differences peculiar to each thing that we customarily set apart<sup>1002</sup> the distinctive account of its essence.] (108a37-b6)

After saying for how many and which things the division of what is said in many ways is useful, Aristotle moves on to the usefulness of discerning differences between things. He says being capable of a

comprehensive view of the differences between things has two uses: for syllogisms ‘about same-as and other-than’, which are brought under the problems of definition, ‘and for recognizing’ each thing’s essence. For syllogisms about being the same as and being other than, because when we have found differences between things put before us as being the same, we have proof that they are not the same. E.g. when it is inquired whether self-control and sanity are the same, and we find that sanity differs from self-control in that the first involves mild desires but the other vehement ones, we have shown that they are not the same; and again if it is inquired whether lack of self-control and dissoluteness are the same thing, and we find that one of them, dissoluteness, is to do the dishonourable thing by preference, whereas the other is to do it against one’s preference, we have shown that they are not the same thing. In a similar way we can show that liberality is not the same as magnificence from knowing the difference that the one is in how much a person spends, whereas the actuality of liberality involves no unusual expenditure.

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The discerning of differences is useful ‘for recognizing’ the peculiar essence of each thing, because the definition of each thing consists of genus and differences,<sup>1003</sup> so if we know the peculiar<sup>1004</sup> differences by which each thing differs from others, we can at once separate it from these others and discern its essence. And as I said before,<sup>1005</sup> the discerning of differences can also be used for dividing genera into species, for objections against inductive arguments, and for some other purposes mentioned earlier, but the principal ones are those presented by Aristotle himself.

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**108b7** The study of similarity<sup>1006</sup> is useful both for inductive arguments [and for hypothetical syllogisms as well as for giving definitions. <It is useful> for inductive arguments because it is by adducing particular instances where there is similarity that we claim to infer inductively the universal, for it is not easy to make an inductive inference without having noticed the similarities. <It is useful> for hypothetical syllogisms because it is an approved (proposition) that as it is with one of a number of similar instances, so it is with the others. Consequently if we are well equipped for dialectical argument with respect to any of these similar instances we will conclude a previous agreement that however it is with these, so it is with the one at issue as well; and if we then have proved the other instance we will have offered a hypothetical proof of the case at issue as well: for we have produced the demonstration on the hypothetical foundation that no matter how it is in the other instances so it is in the one at issue. And <it is useful> for giving definitions because if

we are able to get a comprehensive view of what is the same in each, then we will not be at a loss as to in which genus we should place the thing at issue in defining it: for of what is common (to a number of things) that which is most of all predicated in their what-it-is will be its genus. And the study of similarity is equally useful for definitions also among things which are wide apart, as for instance <to establish> that calmness in the sea and stillness of wind in the air are the same thing, either of them being a form of quiet, and that a point in a line and a unit in a number (are the same thing), either of them being a beginning. Consequently we will not be held to be defining in a way that is foreign to the subject matter if we give as the genus that which is shared by all instances. This is in fact very much how those who practise definition are in the habit of giving definitions, for they say that the unit is the beginning of number and the point the beginning of a line; so it is plain that they place the two in the genus shared by both.

These are the instruments through which syllogisms are produced. The topics for which the things mentioned so far are useful are the following.] (108b7-33)

Of the study of similarity too Aristotle says what uses it has. He says it is useful ‘for inductive arguments’, which have themselves been shown to be appropriate to dialectic, ‘for hypothetical syllogisms’ – as he here calls those which we call ‘from agreement’<sup>1007</sup> – ‘and for giving definitions’.

‘For inductive arguments’, because in induction the universal is shown to become credible through the similarity of the particulars: induction proves that every human is rational through the fact that each human in particular is rational and in that respect similar to the rest; it proves that all that comes to be does so out of its contrary from the fact that white comes into being from black, musical from amusical,<sup>1008</sup> hot from cold, and similarly for the rest: so the universal is proved by the fact that each case is similar. And that no living being without lungs has respiration, or none with horns has incisor-teeth in both jaws, also comes to be known through induction and juxtaposing<sup>1009</sup> similar instances.

‘For hypothetical syllogisms’, because we postulate that what is shown of one thing has also been shown for the others on the ground that they are similar to each other, for hypothetical syllogisms are not produced with just any subjects but with subjects which are similar. What is now<sup>1010</sup> called a hypothetical syllogism is as I said ‘from agreement’, since we produce a proof for some concrete instance on the supposition that as it is shown for a concrete instance, so it will also have been shown for other similar ones. Thus, because

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opposites are in one respect similar to each other, we postulate that what is shown for one of them has also been shown for the others; e.g. if we show that contraries cannot hold of the same thing at the same time by the fact that they tend to cancel each other, and that things which tend to cancel each other cannot hold of the same thing at the same time, we believe that we have proved the same point for other opposites too, on the strength of our previous agreement<sup>1011</sup> that what is proved for one opposite has also been proved for the others, which no one would have conceded but for the similarity between them. Again if, wishing to prove that every soul is immortal, we obtain that if any soul is proved to be immortal then due to the similarity between souls every soul is immortal, and prove that the rational soul is immortal, then every soul has been proved immortal *ex hypothesi*.<sup>1012</sup> And we postulate that we have proved that every movement is from a place to a place when we have proved this for movement in space.

Again the study of similarity is useful ‘for’ finding and ‘giving definitions’, since ‘if we can get a comprehensive view’ of what is common and similar in different things, we are able to obtain their genus, since that which, among things common to a number of subjects, is above all others predicated of these things in the category of what they are<sup>1013</sup> is their genus, and finding their genus is useful for giving their definitions. Thus if we take horse, human, dog, cow, and so each of the other animals, collect the similarities between them, such as that they have a body, a soul,<sup>1014</sup> colour, are in a place, have sense-perception and are animal, and then pass a comparative judgement as to what above all other things is predicated of all of them<sup>1015</sup> in the category of what they are, we get their genus, since of what is common to a number of things that which is predicated of these things in their what-it-is, is either species or genus; but with things of the same species discerning this species is readily done, because things which are the same in species are only numerically different, which is why they do not call for investigation. With things of different species, on the other hand, it is not as easy to obtain what is common to them in this way, and this is why of similarities between these ‘that which is most of them all predicated in the what-it-is’ is their genus.<sup>1016</sup> Aristotle says that the genus is what is predicated ‘most of all (things)’ in the category of what a thing is, because the common differences of these things can also produce the impression that they are predicated in the category of what the thing is, as e.g. being animate and having sense-perception are predicated of all animals: thus even if these<sup>1017</sup> too may be said to be predicated of them in this category, still animal is predicated of them in this category to a higher degree and as being better known. This ‘of what is common to a number of things, that which is most of all predicated in their what-it-is’ may also mean ‘of what is common to a number of things,

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that which is (so) most of all, (while) predicated in their what-it-is, is genus.<sup>1018</sup> In that case Aristotle would by ‘the most common’ be separating the genus from the species, since both are in the category of what a thing is, but that is most common which is in all and in the greater number.<sup>1019</sup> So studying similarities gives us the genus, and recognizing differences in general gives us specific differences, and these make up a definition.

10 Aristotle says that studying similarity is useful for finding the genus not just in things which are not wide apart, but ‘also in things which are wide apart’, since with these too we can find a common genus in them by obtaining<sup>1020</sup> their similarities, and if we add to this the peculiar property of each of the things differing in this way, we

15 have defined them. For if we find things which are similar by analogy, obtain their similarity and sameness<sup>1021</sup> as a genus and add to this that which either or each of these similar things is in,<sup>1022</sup> then we have defined each of them. Thus ‘calmness in the sea and stillness of wind

20 in the air are the same thing’, since each of them is a quiet in that<sup>1023</sup> which it properly belongs to, and when we have obtained this ‘quiet’ which was common to both calmness of sea and stillness of wind and add to it ‘in the sea’ we give the definition of calmness of sea, whereas if we add ‘in the air’ we give that of stillness of wind. Again, since starting-point is the same thing in the point and in the unit – for ‘a

25 unit in a number’ is as ‘a point in a line’: both are starting-points – therefore if for each of them we add to starting-point that of which it is a starting-point, we have defined them: a point is a starting-point of a line, a unit a starting-point of a number. In general the study of similarity is most peculiar to scientific knowledge and to every rational discernment, since the universal is obtained through similarity, and discerning the universal yields scientific knowledge.

30 ‘The instruments through which syllogisms’ are produced are the said four. Next Aristotle proposes to offer the topics (i.e. ‘places’) from which attack arguments take their departure,<sup>1024</sup> for which the technical preliminaries given in the present book<sup>1025</sup> are useful.

## Notes

1. The absence of this noun from Alexander's first quotation in his commentary at 5,20 below, where see note, has led Brunschwig to bracket it in his edition of Aristotle's text. Cf., however, 7,1; 85,7 and (without 'every') 88,19 below.
2. As Abbamonte reports, the MSS give the Aristotelian lemma, although Wallies does not; in any case the fact that Alexander begins by commenting on the first significant word in Aristotle's text shows that this is an entry forming part of the commentary rather than an introduction to it.
3. And at the same time 'theme' (cf. 25,17): what the author proposes and propounds. Here the term is used by Aristotle (100a18), but Alexander agrees that it is necessary to raise the subject: 125,3-5, and introduces it of his own accord as being didactically helpful at *In An. Pr.* 8,4 and 9,5, where Aristotle had only announced the topic 'what the investigation is about and is concerned with' (*peri ti kai tinos estin hē skepsis*), summarized by Alexander as *to prokeimenon autōi* (8,12), 'what he has made the issue' and so 'his subject'. It had in fact become a standard item in commentaries from Andronicus onwards, cf. Praechter (1990) 46.
4. The Greek term *pragmateia*, used by Aristotle at 100a18 and 101a26, comprises both the study or treatment of a subject and the treatise in which this is laid down, cf. 4,3; 6,17; 26,18.
5. *Topics* is the study of 'places' (*topoi*; hence, from a species of them mentioned at *Rhet.* 2.20-6, 1393a21-1403b2, English 'commonplaces') for finding arguments or more precisely premisses for these. Occupying oneself with such or similar places is most commonly the job of the orator, who can learn how to see what may be found persuasive in public speeches from Aristotle's *Rhetoric*, but the *Topics* addresses the dialectician, who learns rules for debate in question and answer form.
6. The word used by Aristotle at 101a26; Alexander at 26,26-30 below calls it necessary to raise this point.
7. The usefulness of dialectic is the subject of *Top.* 1.2: below, 26,24-32,10. Of the three uses listed there by Aristotle at 101a25-b4, Alexander here singles out the second one, i.e. that given at 101a34-6, for reasons specified at 26,31-27,2 below. The goal of dialectic is the subject of *Top.* 1.3: below, 32,11-34,5.
8. The art of rule-bound philosophical debate. For the difference between this and *rhetoric* see 3,25-5,20 and 6,18-23 below; for the difference with *apodeictic* see 18,10-19,27 below. It is a moot point whether Aristotle has just one homogeneous conception of dialectic or several. Alexander's treatment implies that Aristotelian dialectic is one, although it may be put to several different uses.
9. The 'thing meant' (*sēmainomenon*): properly a term of the Stoics that in technical usage denotes the 'meaning' of, or 'concept' represented by a term rather than the 'referent', the external object referred to, though this distinction is presumably not operative here. Similarly 3,23 below. Cf. 12,4-13,10 with nn. on 12,15 and 13,2 below. – For the conception of dialectic of the three major schools cf. Van Ophuijsen (1999) 295-6.
10. This term, which makes the words of the wise man extend to expressions

of what is ethically right but suggests there are objective, perhaps natural standards for these, is one of those that help ancient philosophers to pass lightly from *is* to *ought*.

11. See on 4,9 below.

12. This does not imply that dialectic and philosophy coincide, but only that dialectic is a *part* rather than, as Peripatetics conceived it, a *tool* of philosophy: cf. on 4,5 below.

13. The ideal individual who has attained the insights and attitudes that the philosopher aspires to.

14. The method of defining by dividing, implied in the *Republic*, discussed and exemplified by Plato in his *Phaedrus*, *Sophist*, *Statesman* and *Philebus*, foreshadowing the Aristotelian classification of genera into species to which Alexander considers it equivalent. Although it looks like a form of what we might now call conceptual analysis, it is supposed by Plato to provide real definitions, i.e. to bring out the order of things in reality. Aristotle's main criticisms are in *An. Pr.* 1.31, 46a32-3: division is a 'syllogism without force', and *An. Post.* 2.5, 91b12-3: 'the way through the divisions does not syllogize'.

15. *Resp.* VII 534 E 2-3 actually says 'a coping-stone upon mathematics', or at least *mathēmata*. Cf. Van Ophuijsen (1999) 293-4.

16. Alexander is passing over uses of the term 'dialectic' in Plato which do not refer or even relate to division.

17. A technique of 'accounting' (*logizesthai*: calculating or reckoning) which at every step takes two propositions, i.e. premisses, 'together' (*syl-*) into 'account' (*log-*) so as to derive one conclusion from them. Cf. at 9,17-18.

18. Defined at 100a25-7 on which cf. 7,10-15,14 below, and with fairly minor variations at *An. Pr.* 1.1, 24b18-20.

19. More explicitly 'in so far as it is a syllogism'; in traditional jargon '*qua* syllogism'; similarly at 2,17 etc.

20. The propositions offered for approval or rejection. The proposition is defined by Aristotle at *An. Pr.* 1.1, 24a16-b14, the 'deductive proposition without qualification' in particular at a28 as 'an utterance affirming or denying one thing of another thing'. In his comment Alexander (*In An. Pr.* 10,17-8) points out the difference with the definition of an *assertion* in Aristotle *De Int.* 17a2-3: 'insofar as they are either true or false, they are assertions; insofar as they are expressed affirmatively or negatively, they are propositions' (tr. Barnes et al. 55). The term 'assertion' is used at 5,10 below where see note. Cf. Lee (1984) 55-64.

21. cf. *In An. Pr.* 26,25-8.30; also *In Top.* 257,20-258,20.

22. See 2,8-15 below.

23. i.e. pointing to, showing a definite outcome: the underlying verb is used at 2,21 below in defining the demonstrative (*apodeiktikos*, which is what some MSS give here) syllogism. They are those syllogisms which yield a firm conclusion on the strength of their own premisses without any further assumptions, in contradistinction to hypothetical syllogisms (*ex hypotheseōs*, see below) and reduction to or through the impossible (*eis to adunaton*, i.e. *ad impossibile*, or *dia tou adunatou*, i.e. *per impossibile*). See *An. Pr.* 1.7, 29a31-3; 1.23, 40b25-7, 41a21 and 33-5; 1.29, 45a24, b1 and 7-9 and 14; 2.14 62b29-31 and 39-40, 63b12-4 and 20; 2.17, 65b4 and 8, and cf. Mignucci (1969) 256.

24. i.e. 'predicating' something of some things (sc. unconditionally). Cf. 8,8-14.

25. Literally, resting on a *supposition*; Alexander's general name for complex propositions. Barnes et al. 23 n. 107 refer to *In An. Pr.* 256,12-4; 258,24; 261,25-6; Amm. *in Int.* 3,7-15; Volait (1907) 24-7.

26. Literally '<is that> according to which (sc. we call some perfect and others

imperfect)', which makes the accusatives from 'hypothetical' be governed by 'we call' rather than by 'makes'. Alternatively, if one prefers to adopt Wallies' suggestion to delete 'according to which' (*kath' hén*), a literal version becomes simply 'the second makes some perfect and others imperfect'.

**27.** 'Complete' would be a more fitting translation, except that in contexts not specifically devoted to the details of syllogistic it might not be recognized as a technical term. The pair of terms is defined at *An. Pr.* 1.1, 24a22-6: 'I call a deduction *complete* if it stands in need of nothing else besides the things taken in order for the necessity to be evident; I call it *incomplete* if it still needs either one or several additional things which are necessary because of the terms assumed, but yet were not taken by means of premises' (tr. R. Smith). See Alexander *In An. Pr.* 23,17-24,18; for other explanations cf. Mignucci (1969) 190-2.

**28.** The figures are defined by the part (subject or predicate) played in each of the premisses by the common or middle term: the first figure is defined by the middle term being the subject in one premiss and the predicate in the other, the second figure by its being the predicate in both premisses, the third figure by its being the subject in both premisses. See e.g. Barnes et al., App. 2, pp. 209-10.

**29.** *An. Pr.* 1.4 (from 25b32) to 6.

**30.** Or just possibly 'assuming'. The present use of the term *lēpsis*, like that of *thesis* translated by 'positing', is not found in Aristotle. The Greek verbal noun in the singular may retain its reference to the act of obtaining or assuming rather than to the thing or things obtained or assumed. Syntactically the sentence might be construed as saying either (1) that we obtain and posit the premisses (genitive of the object) in different ways, or possibly (2) that the premisses (genitive of the subject) assume and posit different things. On reading (1), 'assume' makes less good sense; on (2) 'obtain' makes little sense but 'assume' is not entirely unproblematic. Idiomatically the most natural thing is to take it that the verbal nouns, like the verbs to which they belong, connote the roles played by the answerer, who posits, and by the questioner, who thereby obtains. Cf. 7,25, 8,8-9.14-16.31 with nn. below.

**31.** Actually this form is rejected as invalid at *An. Pr.* 1.4, 26a2-8: cf. Mignucci (1969) 217-19; Smith on 26a5-9 refers to Patzig 168-92, Lear 54-61 and 70-5. To Alexander's present limited purpose of illustrating purely formal distinctions it makes no difference whether or not his examples would yield valid conclusions.

**32.** This form is rejected as invalid at *An. Pr.* 1.6, 28a30-4.

**33.** With 2,15-3,24 on the different kinds of syllogism cf. 10,26-8 below, *In An. Pr.* 8,19-29; 12,7-14,6; 18,22-31; 28,24-30; 33,12-24; *In Metaph.* 260,1-20 and, adding an 'examinatory' fourth kind, *In An. Pr.* 1.4, *On Conversion* 57-9. (Barnes et al. 49 n. 49.)

**34.** cf. 22,10-14 below.

**35.** This division into species is the subject of 2,20-6 and 15,15-22,6 below. Cf. Lee (1984) 38.

**36.** The time-honoured translation, via Latin, is *arts*, which when left unspecified tends to suggest something more ethereal; it is relevant to Alexander's point that his illustrative parallel involves *matter* in the everyday sense of tangible stuff.

**37.** cf. on 2,6 above.

**38.** The verb *sunagein* means literally 'bring together', cf. 14,25 below: terms are brought together into premisses, premisses into syllogisms which thus lead to, entail or 'deduce' their conclusion. Cf. Barnes et al. 19-20.

**39.** Literally 'that which has been put forward'; in the context of dialectical debate primarily by an audience and/or jury, for the two participants to argue for

and against; thus at 3,11 where see note. The word differs only in tense from those translated ‘put forward’ there. Cf. Barnes et al. 25.

40. This and the three following requirements are discussed by Aristotle at *An. Post.* 1.2, 71b20-3.

41. i.e. peculiar to the relevant science (*epistêmê*). The Greek word, literally ‘at home, of the same house’, sometimes implies an *exclusive* relation, as at 3,29-30; 4,6.14 and 5,5 below.

42. Or ‘primary’, literally *first*; i.e. which do not themselves rest on other premisses, or at least not on questionable ones.

43. The distinction between ‘better-known without qualification’, which the associated term ‘prior’ shows is envisaged here, and ‘better-known to us’ is referred to by [Alexander] *In Top.* at 435,21-2; 437,2-10; 437,15-438,2 and 438,12-439,18 (on *Top.* 6.4, 141a26-142a33). Cf. on 86,22 below.

44. The plural presumably includes the other early Peripatetics interested in logic, in particular Theophrastus and Eudemus.

45. This is ideally the procedure of a science as Aristotle conceives it: a body of knowledge ordered as a progression from indemonstrable but indisputable principles to more particular statements. From Aristotle’s perspective geometry, which by his time had assumed much of the character known to us from Euclid’s *Elements*, came nearest to being a realization of this ideal. Aristotle’s own work in the sciences largely addresses the preliminary task of establishing the appropriate principles, which is partly dependent on dialectical argument. Cf. Mignucci 1965.

46. Aristotle’s definition at *Top.* 100b21-3 is quoted at 18,27-9 below, where see note.

47. The *Sophistical Refutations*, which is devoted to ways of countering such arguments, is treated by Aristotle as a continuation to the *Topics*. It is not included in the present commentary by Alexander.

48. This is not to deny that they constitute different (sub)species within the same species or under the same form (*eidos*).

49. Alexander gives only the premisses; they share the conclusion, ‘pleasure is not good’.

50. In Aristotle’s conception of science, the inferences typically show that certain further characteristics of an object of scientific inquiry, e.g. a lunar eclipse (cf. 16,8-17,24), simply follow from its definition coupled with other necessary truths, which jointly serve as premisses. These premisses must be true, but need not be approved; they might be newly discovered.

51. The definition is quoted by Aristotle at *EN* 7.12, 1152b13. Cf. on 28,12 below.

52. cf. on 2,16 above. The claim is approved as being admitted by many and so, within reason, by the interlocutor.

53. This refers to the technique for dialectical debate in which one interlocutor (Q) tries to get the other (A) to contradict the thesis he (A) has put forward (*probeblêmenon*) by putting questions to him (A). The admission (by A) of a contradiction is meant to follow deductively from assent to the questions which he (Q) propounds to (*proteinein*) his opponent as premisses (*protaseis*) for refuting him.

54. Alexander introduces the concept of a ‘problem’ (*problêma*) in a way that makes Aristotle’s term (‘thing thrown forward’) transparent. The term ‘proposition’ (*protasis*) is similarly related to a verb (*proteinein*), here translated ‘propound’: cf. on 36,23 below.

55. Neuter plural: ‘things’ of the nature of a proposition, as the context makes clear. In such contexts we will often insert ‘(propositions)’.

**56.** This verb will be used to translate *lambanein* (literally ‘to take’, esp. in the aorist *labein*) as used of propositions granted to the questioner by the respondent.

**57.** *protethen*, here by himself to the respondent, but cf. 2,21 and 3,13 with nn.

**58.** The ‘insofar as’ entails that we may read ‘not from true propositions’ as ‘not from true propositions *only*’. This is confirmed by ‘all’ in the next clause. In the sequel down to 15,29 ‘premiss’ or sometimes ‘proposition’ has repeatedly been inserted where the Greek only has a neuter adjective in the plural, used substantively: ‘the approved’ or ‘the true’, i.e. ‘things that are approved, true’.

**59.** cf. 2,21 and 3,11 above with nn.

**60.** i.e. contradictions; cf. 4,17-29 below, esp. 4,20.

**61.** Aristotle’s proof is in *An. Pr.* 1.2, 53b11-6.

**62.** The difference in meaning between the two Greek verbs is not clear. Conceivably the one translated ‘grant’ (*didonai*) refers especially either to the initial admission of the thesis a respondent agrees to defend or to his final admission of its, and/or his, defeat, whereas the one translated ‘concede’ (*sun-khôrein*) more usually refers to the questions that he answers in the affirmative on the way.

**63.** Or in the *principal* or *proper* sense, as opposed to both metaphor, cf. 3,23 below, and abusage, cf. 3,24 below.

**64.** i.e. its being *what it is*, also known as ‘essence’.

**65.** The Greek verb (*metapherontes*), literally ‘to transfer’, is that which underlies the technical term *metaphor*.

**66.** cf. on 1,9 above.

**67.** i.e. not in the proper sense (*kuriôs*), cf. on 3,19 above.

**68.** In the opening sentence of *Rhet.* at 1.1, 1354a1 Aristotle calls rhetoric a counterpart to dialectic. It would seem that the sense of the adjective justifies the use of a definite article: ‘the counterpart’.

**69.** cf. on 2,16 and 3,4 above. In the context of rhetoric there is no interlocutor, so that being approved (*endoxon*) refers to being admitted by the jury, assembly, or other audience, which supposedly amounts to being generally admitted.

**70.** The Greek adjectives translated ‘counterpart’ and ‘corresponding’ share the root of the participle ‘revolving’. They seem to derive ultimately from the sphere of dance.

**71.** cf. on 2,20.

**72.** Emending the *kathauto* (KATHAYTO) of MSS into *kataauto* (KATAYTO) rather than, with Wallies, into *kath’auta* (KATHAYTA). That they exist ‘by themselves’, to the extent that it is meaningful and true, is less relevant; the point is that they hold of *just that* class, and that they hold of the class *as such*.

**73.** And in its *substance*. As an example of things which do belong in this way Dr. Abbamonte adduces *An. Post.* 1.4, 73a34-7: line to triangle and point to line.

**74.** *pragmateia*, for which see on 1,3 above.

**75.** Music, although originally it could include more of the Muses’ arts than we understand by it, has by Alexander’s time come to refer to the theory of music, conceived as a science comprising at least harmonics and rhythmics and sometimes metrics, cf. Van Ophuijsen (1987) 6-10 and id. (1993a) 861.

**76.** Properly the art of healing or the physician’s art.

**77.** cf. on 2,22-3 above.

**78.** These three subjects were by Alexander’s time recognized as the main divisions of philosophy as distinct from the arts and sciences, though the followers of Aristotle regarded logic as propaedeutic rather than as forming part of the subject; hence the name of *Organon* or ‘tool’ traditionally given to his logical works. ‘Physics’ or physical science started out as the study of the enmattered world as a

whole, ethics as that of human character and behaviour including its evaluation, and logic as a general name for different enquiries concerned with human speech and its uses, especially in argument.

79. The distinctive property or *proprium* is what is ‘proper’ to a thing as opposed to what is ‘common’ to it and other things. This is Aristotelian technical vocabulary for anything that does not enter into the definition of a thing, i.e. is not its *specific difference*, but just like the specific difference belongs to ‘all of it’ (*omni*), i.e. invariably and to all specimens, and belongs to it ‘alone’ (*soli*).

80. In the precise though wide sense of what regards the city and/or state (*polis, civitas*) and civil society, its constitution (*politeia*), its citizens (*politai*) considered as political agents, their moral choices and civic affairs. Cf. next note.

81. cf. *Rhet.* 1.2, 1356a26-7 ‘that inquiry into moral character (*tēs peri ta ēthē pragmateias*, ‘Ethical studies’ Barnes 1984) which is justly called political’. The context brings out how what we call psychology and ethics are continuous in the ancient perspective. That Alexander had this context in mind is confirmed by his bracketing dialectic and rhetoric as ‘abilities’ or ‘capacities’ at 4,20 and 4,29-5,4 below, which recalls 1355b25.32 and 1356a33.

82. Literally ‘for opposites’, i.e. contradictions, cf. 3,8 and 10.

83. i.e. specifically, neither indifferently nor arbitrarily.

84. The verbs connote the relation of being *prior* and *posterior* to each other in the necessary order of things, not in time.

85. The indefinite reference fits the schools of Plato (cf. 1,15-16 above) and of Aristotle (cf. 1,17 and on 1,14 above, and *Rhet.* 1.2, 1355b25.32). The Stoics on the other hand classify dialectic as a science, cf. 1,10 above.

86. Or less pointedly ‘use them well and use them badly’, in the sense of more or less competently. Cf. 32,16 with n.

87. Or ‘the instrumental ones among good things’, cf. *EN* 1.10, 1099b27-8 ‘of the remaining goods ... others naturally contribute and are useful (sc. to happiness) in the way of an instrument’ (*sunerga kai khrēsima pephuken organikōs*); cf. also *GC* 2.9, 336a1-3.

88. *Rhet.* 1.2, 1355b33-4.

89. Or both terms of an opposition.

90. ‘Such as to go through to the end of’: either ‘continuous’ or ‘(in) discursive (form)’ or just ‘(sustained) at length’, ‘in full’.

91. cf. 3,8 above.

92. cf. on 2,4 ‘proposition’ above. Aristotle’s discussion is in *De Int.* 5-6, 17a8-37. Alexander at 294,18 mentions the ‘assertoric statement’ (*apophantikos logos*) as the genus of the ‘contradiction’; the proposition will be defined below as the ‘question of a contradiction’, i.e. a request to affirm one of a pair of contradictions.

93. 4,13-14.

94. cf. Quintilian 3.5.18, 5.10.104.

95. Or ‘occasions’, ‘opportunities’.

96. In the everyday sense; not the (common or special) places or topics which are another feature of both rhetoric and dialectic.

97. Alexander appears to be alluding to the *peristatika moria* or ‘circumstances of the case’, coming under the headings traditionally memorized in the Latin hexameter line *quis quid ubi quibus auxiliis cur quomodo quando*, ‘Who <did> what, where, when, how, from what motive and with what aid?’

98. This triad represents the three branches of oratory: forensic, deliberative and epideictic.

99. e.g. *De Int.* 11, 20b22-30 on the dialectical question, *An. Pr.* 1.1, 24a22-b15 on the dialectical proposition, 1.30, 46a3-10 on dialectical syllogisms, 2.16, 65a35-7

on the difference between *petitio principii* or ‘begging the question’ (*ta en arkhei aiteisthai*) in dialectical and in demonstrative arguments, *An. Post.* 1.11, 77a26-35 on dialectic as opposed to the sciences, *Metaph.* bk. 4, and *Rhet.* 1.1, 1354a1-11, 1355a9; 1.2, 1356a34-b2; 1.4, 1359b9-16; 2.24, 1402a3-9 on various similarities to and differences from rhetoric.

**100.** The verb, literally ‘to give’, ‘to pass on’, ‘to hand on’ (*paradidonai*) applies to the transmission between teacher and student, and then especially to a scholarly tradition (*paradosis*), cf. 19,20 below.

**101.** In the opening sentence of the *Topics* 1.1, 100a18-20 (see above with n.); Alexander here omits ‘(every) problem’, though he writes it at 7.1, and replaces ‘from’ (*ex*) with ‘through’ (*dia*). There is no need to assume that this is what his copy of the *Topics* read: it is only to be expected of a commentator that he introduces alternative formulae in his paraphrase.

**102.** Fr. 122A FHSG; cf. 126,14-16 (=fr. 122B FHSG) and 135,2-11 (=fr. 123 FHSG) and 18-20 below, and see De Pater (1968) 167 with notes, Van Ophuijsen (1994) 159-60. The repetition at 126,14-16 ensures that we have authentic Theophrastus down to ‘which come under it’; one could quarrel over the disjunction – here enclosed between dashes – that is not repeated there, but the burden of proof is on anyone who would wish to reject it. The two plural demonstratives, one within this disjunction (*autôn*, translated ‘(from) them’) and one following the definition ‘For starting from these’, *toutônn*), which FHSG find obscure, are explained by the fact that we need not just one but a number of topics to do the proving and obtaining they enable us to do. Alexander does not give Aristotle’s own notoriously loose definitions of the topic at *Rhet.* 2.22, 1396b22 (=an element of an enthymeme) and 2.26, 1403a17-9 (=an element, *embracing* a number of particular kinds of enthymemes), perhaps because he took it for granted that these apply only to the topics of rhetoric.

**103.** The word, traditionally translated by ‘principle’, is used by Theophrastus in a loose sense, as the reference to ‘a principle from which we take principles’ alone would make clear. There are parallels for such a use in Aristotle e.g. at *SE* 6, 168a17; for the more specific sense of ‘principle of demonstration’ or ‘of science’ see *An. Post.*, e.g. 1.2, 72a7; 2.19, 100b9. On ‘the principles as topics’ see Wieland (1960-1) 206-19 = (1975) 127-40 and (1962) 202-30.

**104.** The substantivised neuter adjective and adverb which Alexander uses for ‘common and universal’ (*ta koina kai katholou*) do not imply any kind of thing specifically, although clearly things of a notional or verbal nature are involved: general propositions whether considered as intelligible or as expressed in words.

**105.** The adjective (*kuria*) picks up the noun ‘starting-point’ (*arkhe*) which in many contexts may be interpreted as ‘principle’. Here presumably what is meant are the premisses, which between them as it were constitute, define and are decisive for the syllogism as a whole.

**106.** i.e. to assume and prove these common and universal things on the basis of topics.

**107.** The distinction between a topic’s being ‘delimited in compass’ (or ‘definite in outline’ thus e.g. Stump 1978) and ‘unlimited’ (or ‘indefinite’, as *ibid.*) as to what comes under it represents an attempt to capture its halfway formal nature: a topic presupposes abstracting to a certain level from individual cases. The distinction thus adumbrates that between intension and extension.

**108.** i.e., perhaps this approved premiss is the starting-point in the sense of line 22, which is taken from the starting-point in the sense of line 21 which is the topic.

**109.** This sentence seems to have been lacking in the now lost manuscript

underlying the Aldine edition and is not found in this place in the entry for ‘topic’ (*topos*) in the Souda lexicon which is based on the present passage. It is bracketed by Wallies, perhaps on insufficient grounds. The critical opinion expressed in it may be related to the fact that our list of titles ascribed to Theophrastus mentions, in addition to two books of *Topics*, a book of *Preliminaries to the Topics* (D.L. 5.50 resp. 45 = FHSG 68, nos. 17 and 19 resp.).

110. Reading *einai te ouk anankaios* or *enioi te hoti ouk anankaios* for the *enioi hosa anankaios* of MSS (EINAITEOYKANANKAION or ENIOITEOTIOYKANANKAION for ENIOTEOSAANANKAIA).

111. Adopting from Parisinus 1832 *ex endoxōn de eirēke hoti oukh* for the *ou gar* of other MSS, which Wallies thinks corrupt yet retains in his text. If this holds water then it would seem that Alexander’s explanation of what a topic is has led him, via Theophrastus’ definition, to deviant or critical opinions voiced by other members of the school: first, that *Topics* book 1 is not strictly a book of topics, secondly that Aristotle’s description of dialectic includes more than is required for a definition.

112. At 3,8-24.

113. Or perhaps ‘have obtained the assumption’, here and in the next conditional at 6,6.

114. i.e. of the nature of an end, as in ‘final cause’.

115. Bracketed by Wallies. The alternative is to insert ‘being’ before, i.e. <on> after it – easily omitted after SIN, especially with a round capital sigma.

116. For the ‘problem’ see 40,12-41,16 below.

117. At 5,20 above.

118. At 4,13-5 above, in different wording, and 5,11-2.

119. There is a slight contamination between *proving* propositions and deciding *problems*. The effect is to stress the parallel between the two disciplines.

120. cf. 83,3-84,9 below. In the context to which Alexander is referring there, i.e. *Top.* 1.11, 105a3-9, the two classes are contrasted with a third class of things that require the <use of> speech, discourse, argument (*tou logou*), which are the province of the dialectician. The first is exemplified by ‘whether snow is white or not’, the second by ‘whether one ought to worship the gods, and to love one’s parents, or not’.

121. cf. 84,10-85,23 below. Aristotle’s motivation at 105a8-9 is that the one class does not contain a puzzle (*ouk ekhei aporian*) and the other is beyond the reach of an art for ‘training’ (*pleiō ē kata gumnastikēn*).

122. *Top.* 1.11, 105a3-9.

123. The specific differences within the genus syllogism, and by extension the species constituted by these.

124. In *An. Pr.* 16,19-23,2, with which cf. the present section down to 15,14 (Barnes et al. 63 n. 62).

125. The difference in focus between the two discussions is brought out by a comparison with *In An. Pr.* 8,19-22, where the ‘primary task of the entire syllogistic method’ is taken to be ‘the account of demonstration’. So there is no perfect symmetry: the account of demonstrative proof takes pride of place – in Alexander’s view, which is based on Aristotle’s texts but also on a tacit assumption that the customary order imposed upon them, traditionally ascribed to Andronicus, represents a definitive authorial intention.

126. This analysis (7,15-25) of Aristotle’s definition in terms of genus and differences parallels *In An. Pr.* 16,22-17,2.

127. i.e. as another name for it: the Aristotelian use of synonymy (in a weaker sense than that of certain current uses, which imply sameness of *meaning* or connotation) found at *Top.* 4.3, 123a28-9 (genus and species synonymous) and 4.6,

127b5-7 (whether genus synonymous with species, since genus is ‘predicated synonymously’ of all species) and defined in *Cat.* 1 at 1a6-12, for which it is sufficient that two terms can be used with the same *reference* in a given context. Cf. on 1,9 above and on 12,15 and 13,2 below.

128. Literally the ‘what-is-it’ (*to ti esti*), often translated by ‘essence’; one of the four types of question that we can investigate (*zētein*) and know and understand scientifically (*epistasthai*) which are distinguished at *An. Post.* 2.1, 89b23-35.

129. cf. *In An. Pr.* 16,30.32. We have not yet come to the differences referred to at 7,6 within the species syllogism.

130. At least not in the sense of a supposition providing the condition for a statement that is different from it.

131. For the narrow link here assumed between ‘positing’ and ‘obtaining’ cf. 2,13-14 with n. above and 8,8-9 and 14-16 below.

132. i.e. if it is dialectical, resting on suppositions approved by the participants in a debate.

133. This may apply both to syllogisms intended to be didactic and demonstrative and, judging from the next sentence, to syllogisms from approved premisses devised in the course of solitary preparation for dialectical debate: cf. *Top.* 8.1, 155b4-16 with Alexander 520,25-521,24.

134. cf. *In An. Pr.* 17,6-7, where Barnes et al. 64 n. 67 note that Ammonius and Philoponus disagreed, and 348,29-32.

135. i.e. by the respondent’s affirmative answer he has posited and the questioner has at the same time obtained his categorical proposition and premiss.

136. In Alexander’s Greek the statement is virtually analytic: ‘suppositional propositions are supposed’ or ‘hypothetical propositions are hypothesized’. Although the terminology hardened into jargon only after Aristotle, this use of the compound verb *hypothesthai* is close to that found e.g. at *An. Pr.* 2.11, 61b17-21 and in the context referred to in the next note.

137. cf. *An. Pr.* 1.44, 50a16-28.

138. cf. *In An. Pr.* 24,7-8.

139. cf. *In An. Pr.* 17,10-18,7. Barnes et al. 64 n. 72 refer to Aristotle’s own statement of this need for at least two suppositions at *An. Pr.* 34a16-9, 40b30-7 (cf. *In An. Pr.* 257,8-13) and 53b16-23, and *An. Post.* 73a7-11.

140. For Antipater’s rejection of the Stoic, i.e. Chrysippian orthodoxy that ‘one premiss does not make an argument’ see Mueller (1974) 58 with n. 44 (p. 69), Barnes (1980) 175 n. 18, Burnyeat (1982) 225, Sedley (1982) 243 n. 10, Lee (1984) 98, and the literature mentioned by Barnes et al. 65 n. 75.

141. cf. 13,25-8 below and *In Top.* 574,10-5, *In An. Pr.* 17,19; 21,25. For discussions see previous note.

142. From the standard process of putting questions to the answerer, i.e. submitting propositions for his acceptance or rejection, something is missing: one of the two questions or propositions needed for a dialectical syllogism.

143. At *Phys.* 4.8, 214b28ff.

144. In hypothetical and in categorical syllogisms respectively. Cf. *In An. Pr.* 17,18-24 (Burnyeat (1982) 226 n. 81). See also on 63,26 below.

145. For arguments with redundant premisses see 8,29-9,5 and 13,28-14,2 below. In addition Barnes et al. 74 n. 136 on *In An. Pr.* 23,2 refer to *In Top.* 568,18-23 on 161b28-30, *An. Pr.* 47a16-20, S.E. *P* 2.156-67 and *M* 8.438-43 and Boeth. *Syll. Categ.* 822 C; cf. Barnes (1980) 164-75, Burnyeat (1982) 226.

146. Or ‘assume’: sometimes either translation will do, because no use is made of the distinction between the logical validity of a deduction, for which it is enough

to assume the (truth of the) premisses, and the probative force of a demonstration, for which it is necessary to obtain the (truth of the) premisses. Cf. on 2,13 above.

147. i.e. the conditional.

148. i.e. in its earlier, single-assumption form.

149. cf. *An. Pr.* 47a22-3 with *In An. Pr.* 344,9-13 and 27-31; 379,20-1, and *In An. Pr.* 17,26-18,1, where Barnes et al. 65 n. 78 refer to Barnes (1990 a), Lee (1984) 98; add Burnyeat (1982) 226.

150. The traditional interpretation – not intended by Aristotle: cf. Burnyeat (1994) esp. 10-13, 21-4, and (1996) 91, 96 – takes enthymemes to be ‘elliptical’ (Barnes (1980) 175), ‘arguments which are invalid without supplementation’ (Burnyeat (1982) 226). Lee (1984) 98 distinguishes enthymemes from single-premiss syllogisms.

151. Although Alexander, like other Aristotelians of the period, freely uses Stoic logical terminology, the conception of logic current in the Peripatetic tradition after the development of propositional logic by the Stoics presupposes that Stoic logic is not a complement to Aristotelian syllogistic but an alternative attempt to cover the same ground, and that its results where valid can be harmonized with it and expressed in the same terms.

152. cf. 21,14 and 25,30 below.

153. cf. *In An. Pr.* 17,18, where Barnes et al. 64 n. 74 provide more parallels for the derivation from *sun-* and *logos*. Actually the noun refers to an instance of *syllogizesthai*, from *sun-* ‘together’ and *logizesthai* ‘drawing up the account (*logos*), reckoning’, i.e. both ‘calculating’ and ‘considering’: combining into one account and calculating the sum; cf. on 2,2 above.

154. On the utility of syllogisms see also *In An. Pr.* 18,12-19,3; 20,12-13. The question may be distinguished from a number of related ones: the usefulness of the present study of dialectic which is the subject of 1,2 below; that of logic, connected with the question whether it is a part or a tool of philosophy, discussed in the prologue to *In An. Pr.* down to 6,12; that of the utility of syllogism and other instruments of proof, *ibid.* 44,2-5; and of various features of syllogisms within the syllogistic method, *ibid.* 28,17-30; 30,29-30; 39,19-40,5.

155. As defined in the opening sentence of *Cat.* 1, 1a1-6.

156. The example is found at *Pol.* 1,2, 1253a21-1.

157. cf. *In An. Pr.* 18,17-18, where Barnes et al. 66 n. 88 give references, and 20,10-29; more parallels and discussion in Frede (1974a) 50 n. 4, (1974b) 116-18.

158. i.e., presumably, with a conclusion that is not different from one of the premisses. Cf. 566,25-7, *In An. Pr.* 18,16-17, where Barnes et al. 66 n. 87 give more references, 164,30 and 345,13. Mueller in Corcoran (1974) 59 with n. 51 on p. 69 mentions other species. Cf. Frede (1974a) 184 n. 21.

159. cf. *In Top.* 566,25-31; *An. Pr.* 64b28-65a37 with Philop. *In An. Pr.* 451,15-453,33, and Alexander *In An. Pr.* 257,1-4 (Barnes et al. 70 n. 112).

160. For criticism see Lee (1984) 47-50.

161. The form or, more likely, the instrument.

162. cf. 2,4.26 with n. above.

163. cf. *In An. Pr.* 20,18-22 with Barnes et al. 70 n. 111. For an argument of this form, the *modus ponendo ponens*, to be syllogistic by Alexander’s standards the co-assumption has to be the same as the antecedent which has to be different from the consequent.

164. i.e., whose major premiss is a disjunction of two contradictories. With what follows down to 13,10 cf. *In An. Pr.* 19,8-20,10. See Barnes et al. 67-9 with nn. 92-104, especially the conclusion of n. 104: ‘All Alexander’s ingenuity is wasted: in the end, he (and Aristotle) must either modify their definition of the syllogism

or else reject disjunctive arguments from contradictories'. See also Lee (1984) 101-3.

165. At 12,5-13,10, as at *In An. Pr.* 20,3, Alexander gives the example of a syllogism in which one premiss is the disjunction of two contraries, and the other premiss, or 'co-assumption', is one of the two contraries or its negation.

166. Alexander seems to be speaking loosely, meaning 'from the denial of one of the disjuncts'. If so, we have here the fifth indemonstrable of Stoic logic. See D.L. 7.81, S.E. P2.158, Cic. *Top.* 56/14 and cf. Kneale 162-3 and on 11,25 below. Its form is not that of a syllogism in the sense of the *An. Pr.*

167. i.e. syllogizing from such a disjunction as one of its premisses.

168. The content, hence '<statement of the> content'; as applied to syllogisms, the description of the inference made in them, or more precisely the explicit formulation of the inferential rule applied in them in a meta-language (the 'metasprachlich[e] ... Beschreibung der Schlussregel' Lee (1984) 103 n. 11).

169. This, the fourth of the Stoic indemonstrables, is another inference schema that cannot be reduced to syllogistic form as set out in the *An. Pr.*: see D.L. 7.81 and cf. on 11,6 above.

170. The relation between an expression and its 'primary meaning' seems to be analogous to that between the 'proper name' (*kurion onoma*) or 'proper word' (*verbum proprium*) and its referent. This latter terminology, confined to the level of single words, most often nouns, is much more common.

171. Notions of 'making plain' and 'pointing out' as applying to words are elsewhere expressed by Alexander in terms of *dunamis*, as Lee (1984) 102 n. 10 notes. As to their having 'the same thing' for an object, the expressions for equivalence of meaning, *isodunamein* and *ison dunasthai* are common in *In An. Pr.* Barnes et al. (18) warn against the temptation to suppose that different words for 'meaning' 'must have different senses, and to establish different senses for them'. They rightly point out (18 n. 91) that the grammarian Apollonius Dyscolus, who 'has an extensive semantic vocabulary', yet 'makes no systematic distinctions among the words he uses'. However, that all of these words 'can usually [my italics] be translated by the one word "mean"' tells little about the connotations of the Greek terminology. I have tried to trace the first steps towards a technical use of terms occurring in the description of verbs in Apollonius' *Syntax* in Van Ophuijsen (1993b).

172. So sameness of reference is here taken as sufficient to establish sameness of sense as distinct from expression: i.e. that two clauses express the same proposition. Cf. on 1,9 above and 13,2 below.

173. At *In An. Pr.* 10,24-8 Alexander seems to have a similar pair in mind when, after discussing 'justice is good' and 'injustice is bad' he qualifies 'the true affirmation and negation' as the same utterance (or statement: *logos*) and assertion (*apophansis*) but not the same proposition (*protasis*). See Barnes et al. 55 n. 14.

174. Alexander seems to be contradicting his own claim at *In An. Pr.* 18,6-7 that 'It is not the case that it is not day' differs from 'It is day' only in expression': cf. Barnes et al. 66 n. 81, 68 n. 96. At the root of the trouble lies an insufficiently articulated terminology: the counterpart of 'only in expression' is not something like 'in expression as well as in meaning' but rather 'in meaning, whether also in expression or not'; the result is that the same difference in expression may or may not, depending on the context, represent a difference in meaning.

175. Wallies' *ho poias* is a legitimate interpretation of the transmitted text, since it cannot be taken for granted that Alexander's autograph showed clear and consistent word division and/or accents. An undivided pronoun *hopoias* would

yield ‘whatever (relation holds etc.)’, which raises the question of what possible relations (*skheseis*) Alexander may be envisaging. For *skhesis*, another term whose use in this type of context is of Stoic origin, see *SVF* 1.49, D.L. 9.87, and Arr. *Epict. Diss.* 4.6.26. On either reading Alexander’s syntax is closer to that of oral delivery than to that of a finished product intended for reading.

176. For 13,25-14,2 cf. Barnes (1980) 168; for 13,25-8 cf. Barnes et al. 65 n. 75, and see on 8,14-9,19 above.

177. At 9,14-19.

178. For 13,28-14,2 cf. Barnes et al. 74 n. 136.

179. Epicurus’ argument involves, in addition to the fallacy which is Alexander’s target, some equivocation on the verbal adjective, and the adverb, verb and participle based on it, here translated ‘without sensation’, which in Greek is applied both to the subject (not perceiving) and to the object (unperceived) of which sensation is denied. Alexander’s analysis disentangles these active and passive uses implicitly.

180. According to the MSS adopted by Wallies, ‘the fact of (our) not having died’ (*to mē tethnēkenai*), but in other MSS this first ‘not’ (MÈ) is omitted and the next one displaced, which is a sign of probable corruption. I suggest reading *mē to tethnēkenai* or *ou to tethnēkenai* so as to extract the more apt sense ‘not the fact of (our) having died’, or, most idiomatic and therefore most corruptible of all, *ou mē tethnēkenai*, which with the preceding infinitive would form a compound ‘to die and not have died’.

181. Either because it sometimes comes upon us ‘without sensation’, or because it need not, as the Epicureans in their zeal to deliver us from the fear of death liked to suggest, occupy us all the time. Just conceivably there might also be a polemical allusion to moral tenets of the type ‘to be alive is to be dying all the time’, ‘in the midst of life we are in death’ and we should translate ‘even if dying is not an ongoing process’, with the ‘(is something) to us’ no longer implied in the second clause.

182. i.e. not according to (correct) procedure. Cf. *In An. Pr.* 21,30-22,25; 68,21-4 and 344,9-46,6; Barnes et al. 72 n. 125 and 134 n. 145 cite other parallels and modern discussions.

183. Greek has ‘the A’, ‘the B’ etc. – or rather ‘the first’, ‘the second’, as the MSS of *In An. Pr.* write in the corresponding passage, 21,31-2. This confirms that ‘... the definite article in this example has no generalising force’ (Ebert (1977) 128 n. 21 against Mueller (1969) 186 f.), or in other words that ‘Alexander surely does not understand the letters A, B and C as variables but rather as abbreviated examples’ (Lee (1984) 109 n. 20); cf. S.E. *M* 11.8-11.

184. At *In An. Pr.* 22,3-5 Alexander gives the same example but with feminine pronouns, presumably referring to lines, rather than with letters, quoting as his source Euclid, *Elements* 1.

185. The first of the ‘common notions’ in Euclid, explicitly invoked in his proof at *Elements* 1.1.

186. At *In An. Pr.* 22,18-23 the same argument is given syllogistic form in a more complete and explicit way with an even more general premiss (‘Everyone who says of what is the case that it is the case is speaking the truth’) added to the one imported here.

187. Here and at 15,19 in a halfway technical use of the word, more or less equivalent to ‘establish’ or ‘obtain’, as though premisses for a proof.

188. cf. 22,8-9 below.

189. The neuter article in the Greek confirms that what has been specified as

'premises' or 'propositions' in the translation has throughout been left unspecified by Alexander.

190. The verbal adjective in Greek does not discriminate between undemonstrated and indemonstrable; cf. below, 17,19 (*opp.* proved) and 17,29 (*opp.* (assumptions) based on demonstrations) where the stronger connotation of 'indemonstrable' makes more sense in the context.

191. This requirement is not in the definition of demonstration which Alexander is commenting on but in that of demonstrative scientific knowledge and understanding (*apodeiktikēn epistêmēn*) given at *An. Post.* 1.2, 71b17-22; the term is explained *ibid.* 72a7-8, 'a starting-point (or principle: *arkhē*) of demonstration is an immediate proposition, and an immediate proposition is one for which there is not another one prior to it.' At 18,14-16 below it is seen that Alexander takes it that this property of immediacy is implied in the definition in the *Topics* in the words 'which do not get their credibility through others but have this from themselves'. Cf. n. 42 and n. 45 above.

192. The meaning of the preposition (*kath*) in ordinary language is vague, but Aristotle puts it to various technical uses, in particular one rendered by 'insofar as'; in the present context one might consider translating 'the form is *that thing* insofar as it is *that thing*', though this is syntactically not the most obvious construction. Semantically speaking the operative connotation here is in any case that brought out by the rendering 'by virtue of' in 17.9 below: the reference is to what makes an X *into an X* or what makes it Y.

193. i.e. is a feature of.

194. Of matter and form.

195. The second clause of this assumption is suspected by Wallies in his apparatus, followed by Abbamonte; they presumably take it to have originated as an explanatory gloss to the first clause. It is true that it is otiose and therefore misleading from a logical point of view. If it is to be deleted, then so, it would seem, is the conjunction (*hoti*) which is here translated 'since'. Alternatively it could, as introducing just a single clause, be interpreted as 'that', but it is less likely that such a clause was embedded by means of both *to*, corresponding to our single quotes marking *mention* as opposed to *use* of an expression, and *hoti*, which would normally bear on the propositional content.

196. cf. 19,11 below with n.

197. The substantivised neuter, cf. on 3,9.12 and 15,29 above. Again the reference is to 'things' which might be classified as being of a propositional nature, and specifically to premisses.

198. The Greek verb does not distinguish between assessments of what is the case and decisions on what should be done; among the examples which follow compare (18,31) 'that health is to be chosen' with (19,2) 'that there are gods'.

199. Traditionally 'wise' (*sophoi*), but at least down to Aristotle's time the word connoted intellectual and technical rather than moral-cum-prudential accomplishment. Cf. Brunschwig (1967) 114.

200. The same Greek word (*endoxoi*) as that used of the propositions defined. We might view this virtual recurrence of the *definiendum* in the *definiens* as a blemish, but the choice of an ordinary language word applying to persons (and to their attributes, as at 266,24 on dying in an *endoxos* way as contrasted with a painless way), transferred to this more technical use, probably helped to make the definition more transparent and thereby persuasive. Within the confines of a dialectical school debate, it is a sufficient condition for making an inference that the premisses should be granted by the interlocutor (cf. 537,9-10, where the object is a general statement established inductively by many instances, 'to posit it and

treat it as agreed (*homologoumenon*) and approved'). They may therefore include deceptive sophistical statements (cf. 6,14-15 'for it is not impossible for things while being untrue to be approved', or from the opposite perspective 19,23 'for some approved things are in addition true', and more abstractly 21,31-22,1 'approved things to the extent that they are approved are neither true nor false'), but in many contexts current and time-honoured or otherwise authoritative beliefs are involved: cf. 69,2 'that which is well-known and approved, such as the dialectical proposition aspires to be'. Cf. Brunschwig (1967) 113-14, Evans (1977) 77-85.

**201.** The article *to* goes with *haireton*, 'the choiceworthy', but one would like to have it secondarily apply to the proposition as a whole, as if Alexander had written to *to haireton agathon einai*, i.e. 'the (proposition) that the choiceworthy is good' – as he may in fact have written, just as in line 34 he writes to *agathon ôphelein*, '(the proposition) that the good is beneficial'.

**202.** The conjunction which appears as 'and' (*kai*) in the Souda and is (otherwise) missing in the MS tradition may originally have been 'or' (*ê*) just as in the previous clause. This would suit the loose and informal character of the context, a random choice of examples rather than a disjunction. Both loss of *ê* and confusion with *kai* (especially when iota-cised) would be made easier by the vertical strokes forming part of the letters surrounding it, with NËT being either shortened into NT or corrupted into NKIT or NKAIT.

**203.** The noun (*doxais*) is connected with the verb translated 'held' (*dokounta*) at 18,27 above.

**204.** Alternatively one could with Abbamonte expand this phrase into a clause, 'and what <is> thus <is> approved' (*kai to houtós <ekhon [or perhaps on or endoxon]> endoxon <esti>*). But such elliptical wording is not what Alexander's usual prolixity teaches us to expect. Cf. on 19,8-9 below.

**205.** i.e. in those subjects on which the majority do not hold any opinion: thus Abbamonte's proposal to interpret the transmitted text as a complete sentence. The resulting phrasing is again (cf. previous note) uncharacteristically abstract and elliptical for Alexander; the alternative is to assume that what we have is one nominal phrase 'the approved found in these things' followed or more likely preceded by a lacuna, which could be filled e.g. by supplying \*(is, will be) useful for his syllogizing' from line 4.

**206.** This approved proposition is to be distinguished formally from the 'principle' of demonstration, cited at 18,22-3 above, that everything that comes into being comes out of something. Materially it could be argued that they are equivalent. In any case both are related to the discussion of 'becoming' as opposed to 'being' deriving from Parmenides and elaborated by Plato.

**207.** i.e. indivisible, atomic matter.

**208.** In addition to the four sublunary ones.

**209.** This passage throws light on the process by which what is 'approved, esteemed, highly reputed' comes to be considered 'reputable', which is how Barnes (1980a) understands *endoxon*.

**210.** See on 5,19 above.

**211.** 'Obtain' here apparently not in the sense of having them granted.

**212.** As distinct from the 'places by means of which it is possible to recollect' (586,11).

**213.** cf. 21,31-22,3 below.

**214.** cf. 22,5-6 below.

**215.** Or 'put to the test' in the original, more general, use of the noun *elenkhos* and the verb *elenkhein*, but the test involved in *elenkhos* is in the present context undertaken with a view to refutation.

**216.** Omitting the article *to* with A, or perhaps taking it to have been changed from an original *ti*, ‘something of this kind’. The operative word thus becomes *premisses*, as distinguishing this species from the other species of contentious syllogism, those which are faulty in form (*skhēma* 20,4) as opposed to matter (*hulēn* 20,3), in other words as a species (*eidos* 21,13) of syllogism. Alternatively one might retain the article and interpret ‘such is the *aspect* of the premisses of ...’, but the term *eidos* as used by Alexander in this context is more naturally understood in its technical sense.

**217.** As opposed to just one eye.

**218.** And therefore the person who is asleep is seeing.

**219.** cf. 22,2-3 below.

**220.** Standard translations of the very common verb *dokein* (20,23-4) are ‘appear’ and ‘seem’, but these do not sufficiently bring out how it differs from *phainesthai*, which has reference to the outward appearance under which an object presents itself, whereas *dokein* relates to a subject’s estimate and judgment of the object. In the present context this connotation is especially relevant in view of the transparent etymological connection that is implicitly operative in the definition of the approved and highly reputed and esteemed (*endoxon* 20,19-20) as what is held to be so (*dokoun*), a connection made explicit at 22,5.

**221.** i.e. from pairs of premisses some of which contain a premiss which looks like but is not an approved premiss.

**222.** Whether explicitly granted by the respondent or merely taken for granted.

**223.** i.e. it is formally correct and valid.

**224.** i.e. in virtue of the form which marks it off as a species, rather than by the subject-matter (*para tēn hulēn* 21,5) distinguishing this or that particular syllogism.

**225.** cf. 9,15 above.

**226.** Against the explicit requirement of *In An. Pr.* 71,28-33 and 76,21-2 on *An. Pr.* 1,5, 27a3-5.

**227.** Against the requirement of *In An. Pr.* 49,27ff.

**228.** Literally ‘specific’, in the strict sense of constituting a species. What Alexander means is presumably that rendering its bearer superior to sensual pleasures is somehow part of the specific difference of the genus virtue and therefore a non-accidental property of the virtues both of self-control (*enkratēia*) and of soundness of mind (*sôphrosunē*). We have here an early example of the still ongoing process whereby the term ‘specific’ is widened to include all ‘that belongs to a species’ – which was once the meaning of ‘special’.

**229.** cf. 19,22-3 above.

**230.** cf. 20,20-1 above.

**231.** i.e. presumably <sphere>: the adjunct ‘owing to the unerring’, which is missing in one MS (P), seems to allude to *Phys.* 4,5, 212b8-22.

**232.** At 19,25-7 above.

**233.** *apo tou dokein hē tou endoxou krisis*: for the transparent etymological connection making this into a virtually analytic statement cf. on 20,23 above.

**234.** The words not included within square brackets provide a lemma at 23,10 below.

**235.** i.e. that which is ‘faulty in species’ and not a syllogism without qualification according to 21,13-15.

**236.** At 15,23 above.

**237.** As often, at once a difference and the variety constituted by this difference.

238. Alternatively one might consider reading *hulēs* (ULÈS) instead of the transmitted *hulas* (ULAS), and translate ‘a variety of subject-matter of propositions besides those mentioned before’.

239. In *Soph. El.*, esp. 2, 165b4-7. Cf. 23,5-8 and 25,19-29 below, where Alexander suggests an identification of the trial or examinational syllogism with the fallacious proof.

240. cf. 25,22 below.

241. i.e. for examining both him and the position he is trying to uphold.

242. The Greek draws on the transparent relation between *dokounta* ‘judged to ...’ and *endoxa* ‘approved, plausible’ (on 20,23 and 22,5 above, cf. 70,2-25; 78,12-20 below).

243. A *pseudographēma* involves at once incorrect geometrical construction (*graphein*) and a fallacious (*pseudos*) pretence of proof. Cf. Dorion (1995) 281.

244. As opposed to continuous: *Cat.* 6, 4b20.

245. In addition to their own principles.

246. i.e. validly deduced.

247. cf. 73,18-9 below.

248. i.e. one of the false opinions involved in the false construction and fallacious proof.

249. cf. 22,10-4 above.

250. i.e. simply for itself, rather than as an example.

251. The reduplication of the article *tōn* in 24,1-2 Wallies is due to a type-setting error.

252. i.e., with AC and CB as their bases (as the diameter of what would be full circles). Similarly at 24,22-3 below.

253. i.e. the sum of them is equal to it.

254. i.e. DC and CE. The reading of a, ‘that on which’ (*hōi*), is incongruous with ‘lines’ in gender; it may be a misreading of ‘those on which’ (*hōn*) inspired by a desire, natural in this context, to find a singular number.

255. cf. 24,3-4 above with n.

256. i.e., now that these lines have been disposed of, there is no longer any triangle for the proof to rest on and apply to.

257. i.e., not counting the fallacious proof.

258. cf. 22,13 above.

259. In Alexander’s paraphrase, Aristotle’s methodological statement of intent loses much of its edge, because Alexander takes ‘specify’ in a loose sense, and takes the conjunction ‘because’ (*dioti*) according to a use (Aristotelian, but more frequent in later times) in which it is equivalent to ‘that’ (*hoti*), and neglects the self-imposed limitation expressed in ‘as far ...’ (*epi tosouton*).

260. One might consider reading *tina*, to go with *koinoteron* sc. *logon*, instead of *tini* with *hypotupōsei*, yielding ‘a more general account in outline’.

261. Of propositions as premisses, as at 21,18.25 above and *In An. Pr.* 42,13; 45,9 and 50,17.

262. At least implicitly in the phrase ‘what looks like a syllogism (...)’ at 100b25; Alexander has worked out the implications at 21,13-31.

263. Esp. in *Metaph. Z* (7.)4-12, esp. 12, 1037b8-1038a35.

264. In *Metaph. Z* (7.)12, 1037b27-1038a9.

265. i.e., Socratically, to help their interlocutors by examining their position and so training them to solve their own problems. On Alexander’s alternative reading of Aristotle offered next the training is of oneself. It is also conceivable that ‘these’ (*toutoīs*) refers not to the interlocutors but to the problems, as shorthand for

the answer given to any of these: that one among the contradictions which the respondent has chosen to defend.

**266.** Argumentative attacks (*epikheirêseis*) are instances of the argumentative strategy which employs the arguments called attack arguments (*epikheirêmata*), defined at *Top.* 8.11, 162a16 as dialectical syllogisms.

**267.** Alexander is referring to the early Peripatetics and their predecessors and contemporaries.

**268.** i.e. not just books like the *Topics* but more generally books of the kind that we have. One might consider writing ‘not so many books’, and take Alexander to be commenting on styles of teaching philosophy in general rather than just of teaching dialectic. This presupposes writing TOTETOSAUTABBLIA instead of TOETOAUTABBLIA; the latter could have arisen through visual confusion with line 17, which would in fact contradict the present context if they were supposed to refer to the same kind of book. But perhaps all that Alexander means is that there were no books for use in dialectic classes before Aristotle and Theophrastus wrote them.

**269.** i.e. such an *oral* exercise.

**270.** Thus Aristotle *Top.* 5.7, 137a3-7.

**271.** Just as the human’s *logos* is his (power of) speech as an expression of rational thought, so his ‘logical’ (*logikos*) nature is his gift of language and reason.

**272.** The phrase belongs to the common ground between dialectic and rhetoric: cf. Cicero *De Or.* 2.157 ‘how the truth may be found, how it may be judged’ (*quo modo verum inveniatur ... quo modo iudicetur*); for ‘finding and judging’ also his *Top.* 6 (*inveniendi* and *judicandi*); narrowed down to ‘finding and judging *what to say*’ at *De Or.* 2.159, *Or.* 44. Cf. Van Ophuijsen (1994) 148-9 and 156 with nn.

**273.** The two adjectives (neuter plural) can be understood (1) without specifying a subject, or (2) with ‘accounts’ (*logôn*, used both of statements, esp. definitions, and of arguments) as the subject of both, or (3) more specifically bearing in mind the distinctions of the art, with propositions/premises (*protaseôن*) being understood with ‘true’ and syllogisms being understood with ‘demonstrative’.

**274.** This latter phrase suggests that dialectical argument is especially appropriate to practical discourse in contexts of reciprocal implications between belief and behaviour. The point is made explicit in 28.21-2.

**275.** *EN* 7.11, 1152b13. The notion of pleasure as a process goes back to Plato *Phil.* 53C5, and the notion that this process or ‘becoming’ like any other is for the sake of some reality or ‘being’ is developed in *Phil.* 54A2-C8. Cf. 3.2 above.

**276.** The argument requires ‘such a process’ (*TOIAYTÊNGENESIN*), against the MS evidence (*TOIAYTÊNPYHYSIN*).

**277.** The verb ‘take one’s impetus or point of departure from’ of 5.19 above.

**278.** Aristotle’s phrase at *Metaph.* 1.2, 995b3-4.

**278a.** Plato *Parm.* 135D3-5, with minor variations.

**279.** The language is not notably exact, but Alexander seems to envisage a division (-*krin-*), preliminary (*pro-*) to positive proof of the truth, among current opinions (*ta dokounta*), between those which can be proved false, and those which at least for the time being cannot be proved false and are therefore indistinguishable in appearance (*phainomena*) from the truth.

**280.** Less probably, the grammatical subject of the clauses depending on ‘because’ could be ‘a science’, taken from ‘no science’ (*oudemia tōn epistêmôn*).

**281.** cf. Aristotle’s equally general ‘say something’ (*eipein*) at 101a39.

**282.** Or just ‘limited’ – but that would turn the next premiss into a tautology, which it is not in the Greek.

**283.** At *Phys.* 3.5, 204b4-7.

**284.** Literally, ‘take an appearance’ or ‘presentation’ (*phantasian labein*);

presumably this is to be conceived as depending on the mind of the student, ‘to form a notion’, although the wording is compatible with an interpretation of the process more along the lines of Stoic epistemology as something deriving from the object, ‘to get an impression’.

**285.** Although both premisses are announced as approved ones, they seem to be treated differently, the first being adopted wholesale as a current opinion, the second reached by comparison of a number of pairs consisting of a limit and that which is limited by it.

**286.** i.e. as soon as we can speak of a dimension or distance or interval (*diaspastis*) or extension (Sorabji (1980) esp. 10) it is possible to measure its length.

**287.** *arkhē*, earlier translated as ‘principle’.

**288.** Or ‘when limited’: the words, literally ‘the limited’ (*tēs peperasmenēs*) serve to exclude the infinite line from consideration.

**289.** Ancient arithmetic does not count one as a number, but rather as the unit of numbers.

**290.** At 30,13-14 above.

**291.** Dialectic, like rhetoric and medicine, does not in fact provide complete control of all the factors determining its effectiveness; it cannot render the dialectician proof against failure. ‘Complete’ (*teleōs*) command in these contexts is ‘adequate’ (*hikanōs*) command by the standard of doing what is within one’s power; it is not ‘perfect’, which is a legitimate interpretation of *teleōs* in some contexts, in the sense of ensuring success, let alone by any absolute or ideal standard. Cf. on 32,17 and 33,26 below.

**292.** The phrase in parentheses is bracketed by Brunschwieg.

**293.** Or ‘how disposed’ (*pōs ekhouentes*).

**294.** The Greek phrase is less specific: ‘both well and badly’, cf. 4,33-4 above. For this characteristic of capacities see *Top.* 4,5, 126a30-b 3.

**295.** The traditional rendering of *stokhastikos* as ‘conjectural’ brings out the element of uncertainty inherent in the disciplines in question under their cognitive aspect. But the Greek adjective is more susceptible than its anglicised Latin equivalent of a literal interpretation as ‘such as to aim at (some object)’, sc. without it being implied that this object is achieved (cf. 33,6-17), which is more applicable to steersmanship and equally applicable to medicine (aim: saving (life), 33,1-2) and also suits Alexander’s explanation of the term with reference to rhetoric (aim: persuasion, 32,25) and dialectic (aim: reducing to contradiction, 32,24). This more pragmatic or functional aspect would be brought out by translating ‘approximative’. At *In An. Pr.* 39,27-31 Alexander specifies that these disciplines are concerned with what is contingent (*endekhomeron* 39,28) and possible (*dunaton*) in the sense of what happens for the most part (*hōs epi to pleiston*) and by nature (*tou pepukotos te kai kata phusin* 28-9), and at 165,8-15 that this type of contingency supplies the matter of our deliberations (*bouleuesthai*, 10). At 300,3 he refers to ‘conjectural problems’ as taking their proof (*deixeis*, 4) from what is ‘for the main part’ (*hōs epi to polu*). See Barnes et al. 98 n. 61.

**296.** i.e. making the thesis to be defended convincing. Cf. *Rhet.* 1,1, 1355b10-11.

**297.** At 33,16-17.

**298.** i.e. those arts, just mentioned, in which some factors, here designated as ‘matter’, are not controlled by the art but subject to chance. Here amenable matter is required for success. That this is a somewhat unusual, perhaps slightly forced, use of the term ‘matter’ seems to be confirmed by the speed with which Alexander drops it in favour of the neuter plural accusative (*tauta*, in the translation ‘these

features'), recalling the 'effects' which 'come about by chance' (*apo tukhēs tina*) of line 19.

**299.** Adopting *protheis*, the reading of P, for *prostheis* 'having added'; the same reading may also mean 'having put this first', cf. 94,15 with n., also with *epiphorein* 'continue'. Less probably *hōi prostheis* 'in, as an addition to which' might be considered.

**300.** These elements, but at 67,31-68,1 Alexander takes the pronoun to refer to the arguments themselves.

**301.** Or more generally 'propositions', cf. above on 15,29 and elsewhere, and so on down to 37,5 and beyond. At 37,10-11 Alexander comes near to distinguishing lexically between *protaseis* without qualification, i.e. 'propositions', and syllogistical *protaseis*, i.e. premisses.

**302.** *An. Pr.* 1.1, 24a25: literally 'is an asking of a contradiction'; i.e. a question submitting two contradictory propositions with a request to the respondent to affirm one of them. Cf. 36,30; 40,19 and esp. 40,24-31 below.

**303.** More precisely, 'in the mode of their utterance', 37,16-17 below.

**304.** cf. 37,10. It may in a loose sense be called an efficient cause in that it triggers the answer, and a material cause in that the same terms make up its subject matter; the difference in form – that which was more lightly called a difference in mode 36,13 = 102a29 – will then be that between on the one hand a proposition (both in the affirmative and in the negative and in question form), on the other hand either the affirmative or the negative as a categorical statement.

**305.** For the respondent to choose between. The Greek verb rendered by 'propounded' (*proteinein*) is transparently related to Aristotle's technical term translated as 'proposition' or 'premiss', just as with 'problem' and 'raised', cf. 3,9-10 above.

**306.** As species within genus.

**307.** cf. on 36,18. Alexander distinguishes two roles but uses one word, here translated as proposition and as premiss.

**308.** i.e. convey the same content in (largely) the same terms.

**309.** For an example see 40,8-9.

**310.** i.e. of dialectical ones.

**311.** Or 'kind'.

**312.** Or 'accident'.

**313.** For the 'distinctive property' as homonymous cf. 39,12ff., 55,13-15 and 114,11-14, following another variety of homonymy (114,6-11) involving the proper name (*idion onoma* 114,8-9).

**314.** Alexander here and in the sequel substitutes (for *horismos*), the word earlier used for *term* (*horos*). In the next sentence both uses of this word are found within one clause. One can make sense of the ambiguity, which goes back to Aristotle, by ordering the uses of the word as follows: (1) *term* in any proposition; specifically (2) *term* in a definition, hence either (3) *definiendum* or (4) *definiens*; hence, by a ubiquitous confusion, (5) *definition*. For the latter use see e.g. 3,2; 7,10.14; 10,25; 13,11; and *Top.* 101a11 (quoted in the lemma at 22,7 above) and 101b22 (lemma at 39,11). At 26,19-20 and at 41,22 (where see note) we find both words used for 'definition', apparently as synonyms, in two successive clauses. Conversely *horismos* is used where a *definiens* is intended at 37,24. In the translation the looseness of the two authors' usage is not straightened out.

**315.** Greek does not have a noun analogous to this as a technical term, but the expression 'is over more', 'over less', 'over an equal (sc. share, portion)' has had this as a fixed use at least from Plato's *Euthyphro* 12C5 onwards.

**316.** Traditionally, *omni et soli*.

317. i.e. predicated reciprocally.

318. Alexander should have said ‘not both to all of it and to it alone’. What belongs to all of a subject but not to it alone, and what does not belong to all of a subject but does belong to it alone, are also not properties but accidents.

319. Alexander’s answer to this question in the sequel down to 39,2 is highly problematic. The crux is why genus should be more apt than difference to designate ‘the combination’ (38,32-39,2). To understand this requires taking into account that we are concerned with real definition of natural kinds; even though difference, like genus, ‘has a larger extension and is predicated of several subjects belonging to different species’, still definitions cannot at will be rephrased with genus and difference changing places. Comprehension of the genus has more implications for the species than comprehension of the difference has; one may suspect a lingering notion of the ‘synoptic view’ to which dialectic is supposed to lead in Plato’s *Republic* 7, 537B8-C8.

320. Earlier translated ‘in (a thing’s) essence’: i.e. in a statement of what a subject is, as in 39,9 below. Perhaps difference is said not to be predicated in such a statement because although it is ‘in the essence’ it is not a proper answer to the question ‘What is it?’, since it does not indicate the genus.

321. Presumably the combination of genus and difference; just conceivably the set of species composing the genus.

322. i.e. subjects of inquiry into genus and difference are species, therefore species is not a predicate on a par with genus and difference.

323. And so cannot be the subject of a dialectical proposition or problem – here we have an early testimony for the doctrine that *individuum est ineffabile*.

324. i.e. one about relations between what can be called genus and species, or species and sub-species, or higher and lower species.

325. cf. 38,30-1 above.

326. Presumably the earliest Peripatetics, in particular Aristotle, Theophrastus and Eudemus.

327. The essence or form subsisting independently of any particular instance of it – and so perhaps prior to it, but for Alexander’s explanation of the past tense cf. 42,4-12 below.

328. Or as we might say, the ‘universals’.

329. cf. 114,17 below.

330. cf. 114,8-9 below.

331. cf. EN 5.1-2, 1130a8-14.

332. MSS vary between ‘man’ without an article and ‘the man’ with the definite article, in the present context apparently without a difference in sense.

333. cf. 36,30 above with n.

334. All that Aristotle omits is the ‘or not’ at the end of his examples of propositions at 1.4, 101b30-1: cf. 41,3-6 below.

335. As opposed to the proposition as a premiss, cf. 35,12 above with n.

336. i.e. that one out of a pair of contradictories which he prefers, cf. on 36,8-9 above.

337. i.e. one which, unlike the dialectical one, cannot be answered by a yes or no: cf. 539,18. This usage, there ascribed to ‘more recent (authors)’, is Stoic, cf. D.L. 7.66, S.E. M 8.71-2.

338. See 42,4-12 below, and on 39,11 above.

339. In the next few chapters I have repeatedly expanded such phrases as ‘the others’ and ‘the things mentioned before’ in Alexander’s comments to ‘the other <predicables>’ etc. where applicable, in spite of the fact that Alexander’s Greek has no such collective name for what he has just called ‘the four species of problems’.

**340.** ‘Definition’ translates Alexander’s *horismos* and *horos* used within the same line (41,22). The terms are in many contexts interchangeable, although *horos* seems more strictly to denote the *definiens* and *horismos* the definition as a whole. This would contribute to the ambiguity, if not confusion, between the present use of *horos* and that for a ‘term’ (cf. on 38,7 above). This is not the standard account of the definition, least of all where the accident is concerned. Alexander is perhaps carried away by his etymologically inspired view of the definition as a demarcation of the thing rather than a formula of a certain form.

**341.** See on 39,11 above.

**342.** Alexander may be thinking of idioms, esp. with the particle *ara*, conveying that what is revealed only now was the case all along.

**343.** The speaker assumes that the person who was knocking just now is still there, and has the choice whether to focus on the (recent) past experience of this person’s knocking or on the present question of his or her identity.

**344.** For additions that Alexander does qualify as redundant see 214,24; 429,12 (Moraux (1979) 135 n. 11).

**345.** cf. 38,30-1 above.

**346.** cf. 7,16 above with n. Genus G and species S are synonymous in that G holds of all S, even though S does not hold of all G.

**347.** cf. D.L. 6.3.

**348.** By Aristotle, as Evans (1977) 112 n. 34 interprets the present passage. He refers to Geach and Anscombe for discussion of the phrase.

**349.** Or just possibly: ‘except in the case where a species is identical with its own genus.’

**350.** A definition originating with the Stoics Antipater and Apollodorus, cf. SVF 3.247, 260.

**351.** cf. 45,28-46,6 below.

**352.** As a definition. The expression to be defined may be either a single ‘name’ (cf. next n.) or a compound expression; the expression substituted for it in a definition of it is always a compound expression. The Greek term here translated as ‘phrase’ or ‘expression’ is the same one that is elsewhere translated by ‘account’ (*logos*), cf. on 43,33 below.

**353.** Or ‘name-word’, ‘naming expression’: the Greek term in most contexts does not distinguish between (proper) name and noun; even adjectives in certain syntactical or logical roles may be included.

**354.** More precisely, whether *definiens* and *definiendum* are the same.

**355.** That *problems* are understood appears from the form of the example in 102a6-7 (‘whether’).

**356.** They are in full possession of actual knowledge.

**357.** On the reading of the MSS, Alexander treats ‘man walks’, a statement, as equivalent to ‘man walking’, a nominal referring expression. One way to account for this might be that, although we would ascribe a different sense to each, their reference is the same. But one may suspect that ‘which’ (*ho*) – a one-letter word in Greek – should be deleted.

**358.** sc. but only that a phrase is given for a phrase: Alexander aims at resolving the ambiguity of *logos*, which may connote among other things both a phrase and a definition; cf. on 43,9 above.

**359.** See on 43,9 above and for this section down to 44,9 cf. 57,11-12.

**360.** i.e. in place of the phrase to be defined.

**361.** This section 44,10-16 is summarized at 57,11-12.

**362.** These four terms, with a number of others in ancient Greek, denote

psychological as well as ethical conditions, to which there are intellectual as well as emotional aspects.

**363.** The Greek, literally ‘have, contain the same/sameness’, does not distinguish between extension or any other respect in which a definition might be or might not be ‘the same’. Cf. 27 and 30-1 below.

**364.** At 103a6-b 1, on which Alexander 57,15-61,24.

**365.** There seems to be a lacuna; it could be filled with a catch-all phrase or with a fuller and more repetitive statement of the parallel cases, such as Wallies supplies in his apparatus.

**366.** Fr. 125 FHSG (= LXXb Wimmer = 41 Graeser = 57 Repici). Cf. Moraux (1979) 139 n. 34.

**367.** i.e., presumably, as a contribution deriving neither from Aristotle nor from Alexander himself. It seems to be implied that the rule is to ‘explain’ (*saphēnizein*), and ‘solve’ (*luein*) Aristotle by means of Aristotle, much in the way in which Alexandrian grammarians claimed to explain Homer through Homer (*Homérion ex Homérou saphēnizein*).

**368.** At 43,7-8.

**369.** i.e. its being what it is. Similarly at 46,11 below.

**370.** i.e. to distinguish between them according as they do *not* and as they *do* specify the essence of the subject, respectively.

**371.** The same example at 53,16-17.

**372.** i.e. of such a non-counterpredicative distinctive property which (is not relative but) is temporary. By itself the present phrase could also be read as ‘or it would not be <a property> in relation to something.’ The context at 53,18, where the example recurs, favours treating relative distinctive properties and temporary distinctive properties as two classes on a par with each other, rather than treating the temporary ones as a species of the relative ones.

**373.** The examples show that Alexander continues to have the human in mind.

**374.** Wallies plausibly suggests a lacuna, where presumably something like ‘<for this also holds of species>’ was said.

**375.** i.e. under the genus.

**376.** i.e. definition.

**377.** At *Top.* 4.2, 122b16 (Wallies).

**378.** i.e. the category of quality.

**379.** *Cat.* 5, 3a23 (Wallies), but Alexander offers a loose paraphrase.

**380.** cf. 102a7-17 on which 44,10-45,7 above.

**381.** By Aristotle at *Top.* 101b39, on which see Alexander 41,29-42,27.

**382.** The wording leaves it open whether A’s being is in its holding of and being affirmed of some B, which would fit attributes, or in B’s holding of and being affirmed of it, i.e. of A, which would fit substances. The negative counterpart to the present statement is to say that a thing’s not being is in a not-holding-of and a negation or denial, which may be analysed along the same lines.

**383.** A problem seems to be generated by a failure to distinguish between being ‘inseparable’ in the senses (1) that some quality must necessarily belong to some substance (cannot not-belong to that substance), and (2) that some quality can only belong to one substance (cannot belong to any other substance), as being snub-nosed can belong only to nose.

**384.** This is probably an objection from Lucius/Nicostratus, cf. *Simpl. in Cat.* 48,1-11 and see De Haas (1996) 200-3.

**385.** The same concrete individual nose, but also the one species nose as a species: cf. 60,17-20.

**386.** i.e. a snub-nose does not become hooked.

**387.** The reason is not quite clear, but perhaps all that Alexander means is that the very existence of an accidental property of hookedness which is incompatible with snubness proves that snubness cannot be more than accidental either: cannot be a difference any more than hookedness is a difference of nose, or any more than snubness is a property of nose; cf. 49.11 above.

**388.** Alexander tries to defend Aristotle against the objection raised by arguing that we may grant that it is essential to a snub-nose to be snub while still regarding ‘the snub-nosed’, i.e. ‘(the quality of) snub-nosedness’ (*to simon*) as the accidental unity of snubness(*simotēs*)-in-a-nose.

**389.** Alexander himself points out that his second interpretation of inseparability no longer answers the initial objection. He therefore now suggests a weak interpretation of the definition of the accidental, which does not stipulate that it should be actually separable from the subject but only that it does not belong to its essence.

**390.** i.e. that it is not essential to the subject’s being what it is, and does not affect what can be predicated of it in the category of what-it-is.

**391.** Wallies’ addition of a second ‘nose’ (*rhis*), yielding ‘the nose would still be (a) nose’, is neat and unobjectionable but not necessary.

**392.** Alexander’s way of dealing with the counter-examples snow and pitch is simply to deny the claim that whiteness and blackness are essential to these two respectively.

**393.** The subjects considered so far.

**394.** This is proposed as an interpretation of Aristotle by Th. Ebert in Ebert (1998) 143-7, cf. Ebert (1977b). Cf. De Haas (1996) 200-3.

**395.** i.e. if not an accident.

**396.** Things that a subject undergoes and is affected with, and by extension the features or character it acquires in the process: its ‘mode’, as translated at 51,5 below.

**397.** Alexander’s final solution elaborates on his earlier denial (50,6-11) of the claim that whiteness is essential to snow. It relies on his revised interpretation of inseparability (49,19-22) and entails his weak interpretation of Aristotle’s definition of the accidental property (with 51,4-6 cf. 50,2-4), on which the colours do not cause a problem. In case the need for this weak interpretation should be considered as an objection to Aristotle after all, Alexander concedes that the definition of the accidental property by negation is the more adequate one materially. Further discussion in Ellis (1994) 69-89 and De Haas (1996) 200-3.

**398.** At 102b10.

**399.** i.e. categories.

**400.** i.e. by the phrase ‘being in a subject’, and so by this criterion for the accident, its being *in* a subject as opposed to the species and differences being *said of* a subject: *Cat.* 2, esp. 1a24-8; 5, esp. 2a32-4.

**401.** i.e. to the subject of and to our discussion of the accidental property.

**402.** i.e. both ‘assign’ in our classification and ‘append’ in the present treatment.

**403.** Either ‘had A followed by B’ or ‘brought, subsumed B under A’, as 52,20-1 suggests; and cf. 53,2-3 *kai ... hupo ti dei tassein*.

**404.** The relative could grammatically have ‘comparison’ as its antecedent but is more probably used adverbially, ‘wherefore’.

**405.** i.e. whether the accidental of goodness belongs to the subject wealth.

**406.** The examples prove that *tōnde tinōn* does not here denote concrete individual substances.

**407.** Alexander is introducing what has come to be called argument *a fortiori*

(*apo tou mallon*) in terms (*kata to mallon kai kata to hētton* etc.) recalling those by which Aristotle refers to it at *Rhet.* 2.23, 1397b12 (*to mallon kai hētton*).

408. Turning from 'more than' to 'less than'.

409. 2.10, 115a6ff. (Wallies).

410. Wallies' addition of an *ē* is not necessary. For other progressive demonstratives in the same context cf. *toiauta* in 52,12 and *touto* in 52,19.

411. i.e. predicates.

412. As propositions, put forward for assent.

413. Some would prefer 'in Being as its genus'.

414. Alexander may be thinking of such traditional examples of nonentities as goat-stags, cf. *De Int.* 1, 16a16, *An. Pr.* 1.38, 49a24, *An. Post.* 2.7, 92b7.

415. i.e. holding-of in the loosest and most general way. This in turn stretches the meaning of *sumbebēkos* to something like 'what holds', 'what is the case', not necessarily in the stricter sense of an accidental.

416. i.e. virtually 'from these definitions'.

417. cf. 46,21-2 above.

418. *Top.* 1.5, 102a22-3, quoted by Alexander 46,15-16.

419. And phrase: the *definiens*.

420. That of 'definitional', given at 102a9-10 (Brunschwig).

421. The predicables.

422. i.e. it can be shown that what is offered (*apodidotai*) or proposed (*proteinetai*) is not the definition, or genus, etc.

423. More precisely, 'is when it is not (...), to say that it is not (...)'.

424. Reading *ēi ē* rather than, with Wallies, *ēi* for the *eiē* of the MSS, here and at line 14 below.

425. See on line 12 above.

426. The Greek here has a compound (*enuparkhein*) of the more usual verb (*huparkhein*, itself a compound), the prefix connoting presence or inherence in the thing. Cf. on 65,5 below.

427. i.e. a property of the definition, distinguishing it from the other predicables.

428. Of 'definitional'.

429. Of problems.

430. 102a19.

431. That *problems* are understood appears from the form of the example in 102a6-7 ('whether') and is confirmed by Al. at 54,25.

432. The only instance of *horos* in Alexander's comment on the present lemma. This reopens the question of distinguishing between *horos* and *horismos*: cf. on 41,22 above.

433. Not 'each of these problems', but 'each of these things themselves', i.e. the predicates such as 'same as' found in propositions used in attempts to solve problems.

434. i.e. all predicables.

435. i.e. what refutes a claim that a predicate holds of a subject not as its definition but as one of the other predicables; in other words, what provides a negative answer to those problems in which it is inquired whether a predicate holds of a subject in this way.

436. i.e. with problems about whether one thing is the definition of another; or, less probably, with things that serve to refute claims that some account is a definition.

437. i.e. such a method.

438. All problems, i.e. problems involving all predicables.

439. i.e. refutations of a claim that a predicate holds of a subject not as its definition but as one of the other predicables, cf. on 54,30 above.

440. Conceivably just 'he who establishes'; but the predicates 'comes under' (literally 'is under') and '(does) contribute' which follow suggest that an implicit subject 'account' (*logos*) is to be supplied. Cf. the two instances of the noun *kataskeuēt-ai* 'the (argument(s)) establishing' in the preceding sentence; contrast 66,31 below.

441. The reference of the Greek neuter is grammatically to accidentals, the sense requires expansion to arguments or places (cf. 55,5) relating to accidents.

442. Adopting *ou*, read in B; cf. 55,6-12. One may suspect that 'all of them' (*panta*) should be supplied, presumably after 'useful', cf. 55,21.

443. i.e. claims that something holds as one of the other predicables (than the definition).

444. Fr. 124A FHSG.

445. i.e. show that one thing holds of another as one of the other predicables.

446. i.e. each *predicable*. By itself the phrase might denote 'each *subject* (or *object*) discussed', but the adjunct 'of them' to the same phrase in the next line imposes the more specific interpretation in this line too.

447. Presumably, the most peculiar characteristics of a *predicable* (other than the definition), i.e. the particular ways of establishing or demolishing each *predicable*'s holding of a subject. For instance, at 54,5-9 some of the ways in which it can be denied that something is the genus or is a distinctive property of some other thing are marked as ways peculiar (*oikeios, -ōs*) to the respective *predicables*.

448. i.e. problems concerning other *predicables*.

449. i.e. *predicables*.

450. i.e. *predicate* or *account*.

451. i.e. proves that the *account* offered does in fact bring out a property.

452. i.e. any claim that the *account* gives one of the other *predicables*.

453. 102b36, quoted 54,32, merely said 'not easy to find'; Alexander's paraphrase at 55,6 added 'nor possible'. Alternatively, 'by our earlier argument' (Alexander structures his own exposition by means of *ekeinōs* and *houtōs*, 'in the former way' vs. 'in the latter way', as he does at 63,14-5). In any case Alexander develops Aristotle's twofold objection against a comprehensive account, (1) not easy to find and (2) unclear and hard to use, into an ordered pair of arguments: (1) *impossible* to find; and (2), even granted – for argument's sake and because Theophrastus tried – that it were possible to find it, then still unclear and hard to use.

454. i.e. of problems, each kind corresponding to one of the *predicables*.

455. i.e. *predicables*.

456. cf. on 57,2 above.

457. 103a1; cf. 25,30-26,11 above.

458. i.e. under each kind of problems which is constituted by one of the four *predicables*, certain classes of problems constituted by other criteria.

459. The relation of this to definition has been explained in 43,33-44,9.

460. The relation of this to definition has been explained in 44,10-16.

461. Problems or conceivably *predicates*.

462. Alexander makes Aristotle's *demonstrandum* ('is going to show that') similarly explicit at 68,6 'In order to show how' (*mellōn deiknunai pōs*. See Moraux (1979) 134 n. 7 with reference to *In An. Pr.*).

463. The Greek phrase 'the same' (*tauton*) does not distinguish between the expression 'the same' and the property of being the same as some other thing. The fact that it here appears as the subject of 'is said', i.e. 'say, call' (*legein*) in the

passive voice, suggests that primarily the expression is meant rather than ‘in how many ways (things) are said (to be) the same’.

464. The word includes both classification of subjects that can be said to be the same, and analysis of the word into relevant senses.

465. At 57,12.

466. cf. 57,9-10.

467. The *diaeresis* Alexander has in mind is in Aristotle’s discussion of being one, at *Metaph.* 5.6, 1016b32-5, not in that of being the same, where, however, sameness is said to be ‘a kind of oneness’ at 5.9, 1018a7-9.

468. Deleting ‘signified’ (*sémainomenois*, agreeing with *tropois* ‘ways’), following Wallies.

469. The Greek is ambiguous between ‘more remote’ and ‘somewhat remote’, and between ‘remote from’ and ‘(more) remote than’. Presumably what makes it applicable in any sense is that this fourth way is more different from each of the three others than any of these three is from the other two. Similarly at 58,26 below.

470. cf. on 58,4 above.

471. cf. on 58,6 above.

472. And so principles (*arkhai*).

473. The Greek uses the noun (*logos*) translated ‘proportion’ in 58,25, where it was used to explain the term ‘analogy’, literally ‘being according to *logos*’. Among its varied and complex connotations (Barnes et al. 19 are wilfully simplistic) relevant are also those of accounting for a thing or defining it, and of a thing’s being ‘of great account’. This particular example of analogy is taken from Plato, *Resp.* bk. 5-6, e.g. 507C-508E and 517A-518C.

474. ‘Some’ (*tina*) could be masculine singular (‘some one’), with ‘way’ (*tropon*) left to be supplied from its previous occurrences (the most recent one is at 58,26), or neuter plural, left undefined, where we might wish to supply a dummy noun like ‘features’, ‘characteristics’. As to sense there is little to choose between the two.

475. There is a slight problem involving sense, syntax and punctuation, which for ancient Greek is rarely if ever more than an editorial convention. The sentence as punctuated by Wallies should presumably mean ‘whether the water coming from the same spring is ever different numerically or whether it is the same in one of the ways (or some of the features, cf. previous note) mentioned above. Or is this another way of the same besides the three mentioned.’ The first ‘or’ thus poses a false opposition, whereas the neat opposition posed by the second one is obscured by the full stop between the two members. I suspect there is a slight anacolouthon and would repunctuate accordingly: Alexander set off saying ‘whether (volumes of) water from the same spring, different numerically, are the same in one of the ways mentioned or this is another way ...’, but because Greek syntax allows this to be construed as ‘whether (volumes of) water is (are) different numerically’ he then felt a need to repeat the subordinating conjunction ‘whether’, while at the same time contaminating the construction by introducing the coordinating pair ‘either ... or’ (*έ* ... *έ*) so as to stress that the disjunction was still to come. It is conceivable that the first occurrence of *έ*, translated ‘either’, is influenced by the use of the same vowel as a particle of assertion, cf. 60,26-7 below.

476. The two volumes compared.

477. The adjective translated ‘of the same species’ (*homo-eides*) makes it more obviously natural in Greek than it is in English to move from sameness to similarity (Greek *homoiotés*). Cf. 59,20-2 below.

478. i.e. fresh water constitutes a subspecies.

479. cf. 112,17 below (Moraux (1979) 134 n. 1).

480. From the premiss that to show (1) that (definition) D is not the same as (name) N implies showing that D is not the definition of N, it does not strictly follow that to show (2) that D is the same as N implies showing that (what D is the definition of) is the same as (what N is the name of). If, however, we assume (2), it is natural to read (1) as a corroboration of it.

481. i.e. that something offered as an account, or specifically as the definition, of a thing is not the same as that thing.

482. The MSS read 'same', which seems either irrelevant or, worse, contradictory to the main clause that follows. My conjecture is that AYTÈS is a corruption of AYTÒN 'their', so what we have is a statement of the doctrine of matter as the *principium individuationis*.

483. i.e. if it were an independent substance. Alexander has in mind the Platonic 'Form', denoted in Greek by the same term (*eidos*) that is translated as 'species' whenever it is opposed, as it is here, to 'genus' (*genos*). To this Form Aristotle, in the course of criticizing Plato's doctrine, applies the verb 'to separate' (*khôrizein*) found at 60,22-3 above (*Metaph.* 13.4, 1078b17-34; 13.9, 1086a32-b11) as well as the adjective (*khôristos*) derived from it, at 1078b30, 1086a33 and b9.

484. i.e. as two individual specimens are numerically different but their species is one, so two species are different but their genus is one.

485. i.e. in species.

486. cf. on 60,9 above.

487. At 46,17-25; 53,11-22.

488. Reading, with Wallies, *hautou* 'than itself' where the MSS have *autoū* 'of it' is not a conjecture but a legitimate interpretation of a textual tradition which may not originally have indicated the difference. His insertion of *auto* 'itself' in front of this is perhaps ingenious but hardly necessary.

489. i.e. different individuals.

490. Rather than accounts, although arguments are composed of these, and the Greek word (*logoi*) denotes both; cf. 62,21 where 'account' applies.

491. Or 'are made up, composed of'; similarly at 62,5.

492. 'Means of persuasion', which would be appropriate in the context of rhetoric, is rather too weak as a rendering of *pisteis* in the context of dialectic, 'means of proof' is too strong: of the two *pisteis* mentioned only syllogistic can supply proof in the sense of demonstration; the 'syllogism based on induction' discussed in *An. Pr.* 2.23, 68b15-29 requires complete induction, which is not the kind envisaged in the *Topics*.

493. On 62,6-13 see Barnes et al. 103 n. 7.

494. *Top.* 100a25-7, on which see Alexander 7,9-15,14 above.

495. The MSS read 'in any other problem'. This would have to bear the force of 'kind of problem', which is awkward to say the least, since the word has been used to refer to individual problems twice in the last two lines, and will be so used in the next line. The letters forming this dative, *problémati*, can also be divided into *probléma ti*, 'any problem' (nominative), which would set us free to supply an unexpressed 'kind' with 'any other'. This would still leave us with the verb *heuretheien*, a plural where we need a singular. The same objection would count against a possible emendation to *problémata* which, as it is plural neuter, would likewise require a singular verb. The plural verb form (*heuretheien*) could easily have been due to a partial duplication ('dittography') of the next word, which is *an*; and the fact that in one MS (A) this verb is replaced by a non-existing verb form is another sign of corruption. This MS also deviates in word order, with the problematic noun (*problémati*) coming before the verb. This suggests that the noun started life as a copyist's gloss and that the implicit subject is 'problems and propositions';

together with an implicit ‘kind’ underlying ‘in any other’ as well as ‘those mentioned before’, this not only fits the sense but is also justified by the context. In sum, delete *problèmati* to obtain the translation given here.

496. *Top.* 1.4, 101b29ff., on which see Alexander 40,18-19; 41,11.14 above.

497. See on 36,8-9.

498. Fr. XVII 112 Rose<sup>3</sup>.

499. cf. 74,12-13 below.

500. i.e. the other two mentioned at *An. Post.* 2.1, 89b23-4.

501. On 63,15-19 see Moraux (1979) 86.

502. And so, as often, e.g. 22,10 above, the varieties differentiated by them.

503. Text and sense are uncertain. Alexander may just be saying that the consequent in a hypothetical proposition resembles any ordinary simple proposition in predicating of some subject one of the predicables; but his wording seems to suggest the stronger claim that the relation between antecedent and consequent in a hypothetical proposition is somehow analogous to that between subject and predicate in a simple one. This forced analogy can be related to the distinction between categorical and hypothetical syllogisms, said ‘not to differ as syllogisms but only in the form of their premisses’ 2,1-6 above (cf. 8,27-9 ‘that the conditional is well-known and evident or the universal premiss is obvious’: the conditional is likened to the major premiss because both are sometimes omitted, whereas the greater similarity between the other two premisses not so treated remains implicit), and more generally to the Peripatetic tendency to reduce logic to syllogistic, playing down the significance of Stoic innovations.

504. Wallies’ full stop seems to reflect a stylistic preference; the coherence of the argument is better served with a colon or comma.

505. The translation is based on a transposition interchanging *tōi hou katēgoreitai* with *ē katēgoroumenon monon*; the fact that one MS (P) omits a part of the sentence beginning here suggests that the present (dis)order results from reinserting an omitted phrase in the wrong place. The alternative is to emend *tōi hou* (TÔIOY) to *tou hou* (TOYOY) or to *toutou hou* (TOYTOYOY), yielding ‘counter-predicated of that which it is predicated of, or just predicated’ (sc. of that which it is predicated of).

506. i.e. what in 64,12-3 was called ‘just’ or *merely* (predicated) as opposed to ‘counter-’ or *reciprocally* (predicated).

507. 64,12-14.

508. Presumably the syllogism detailed from 63,21 onwards, which began by being applied to ‘every problem and proposition’ (63,21-2), but led to a conclusion that mentioned only the problem (64,7).

509. Not the proposition as equivalent to the premiss (as at 64,9.16.27 above), but as distinct from the problem.

510. Or ‘of the predication’, as the word is used – without ‘kind of’ – at 66,14. Although it is on the whole preferable to use the traditional term ‘category’ (*katēgoria*) for these ‘kinds of predication’, we do well to bear in mind the transparent relationship to the terms for predication (*katēgoreisthai*) and counter-predication. For the wording cf. Wieland (1962) 202-3.

511. At once ‘are present in’ (the notion made explicit by *enuparkhein*, cf. on 54,15 above) and ‘hold of’ (the more non-committal sense of the verb *huparkhein* + dative without the preposition *en*) a subject.

512. 65,6; cf. 59,25 and Moraux (1979) 134 n. 1.

513. And the varieties they constitute, cf. on 63,24 above.

514. More usually Alexander gives the title simply as *Categories*, as at 47,19

above. At 93,11 he writes 'in the *Ten Categories*'. At this stage of book production we do not yet have formal titles, only shorthand indications of the contents.

515. cf. 67,22-5.

516. Also 66,33.

517. i.e. kinds of categories.

518. i.e. with 'kinds' added.

519. The parenthesis is obtained by interpreting *peri hô̄n* as *toutōn peri hô̄n*. This is all the easier because 'genus' also denotes the class of things which is the object of a branch of science.

520. At 39,2-4.

521. Syntax indicates a lacuna; Wallies suggests a supplement *hô̄ste estai* (ÔSTEESTAI) 'so that there will be' or 'There will therefore be', which could have been omitted through haplography after OUSIAIESTAI. Alexander means, and may expressly have written '*Definitional* problems will therefore be that in the category of substance' etc., i.e. *hô̄ste horika estai problēmata to men horikon en ousiai* etc.

522. i.e. whether definition, genus, etc.

523. i.e. the problem or proposition.

524. i.e. what was earlier called 'kind (of category)' (see 65,9 and 22-3), now expressed as hendiadys, rather than 'kind' as applied to the predicables.

525. Presumably with the implication 'and the other thing not from the one': not counter-predicated. Cf. 67,16-17.

526. i.e., presumably, (1) (the kind of category) as well as the accidental property itself which is being predicated. Conceivably (2) the genus as well as the accidental property predicated; hardly (3) (the kind of category) as well as the genus, the 'kind' as this term is applied to the predicables.

527. As distinct from a substance underlying, i.e. subject to the accidental property. A substance may be white but whiteness is not a substance, if one is not a Platonist.

528. Perhaps practically equivalent to 'accept', as opposed to rejecting a problem put before one because it is not well-formed. Cf. 67,11, of a name instead of a definition.

529. Of categories.

530. Reading genitive 'of, belonging to (that) genus' (*genous*) with aB, rather than nominative '(in that whose) genus (the property is)' (*genos*) with ADP followed by Wallies.

531. i.e. predicables.

532. Alexander begins his clause by quotation, adds an explanation, and ends in paraphrase.

533. Hardly 'the <account> which', as at 55,8 above, where see note.

534. i.e. is the object of the inquiry.

535. i.e. the respondent.

536. The conjunction is not in the transmitted text but was supplied by Prantl.

537. At 66,31.

538. 103b36.

539. Alexander has just exemplified the first two categories.

540. i.e. the same as the subject (and only by implication as each other).

541. cf. on 66,17.

542. 103b37.

543. i.e. the *problem*; grammatically it would also be possible to construe this sentence as 'And the what-it-is no longer signifies the subject' or as 'And the subject no longer signifies the what-it-is'.

544. The plural feminine allows for either 'predications' or 'propositions'; the

context favours the former, although the latter could be defended as the more generic term, or as a term even more basic to the subject of the *Topics*.

545. At 66,15-17.

546. The indefinite pronoun, translated 'a', is odd. One may well consider reading *tina*, 'some' (sc. problems), for the *tini* of the MSS.

547. Apparently a dialectical genre dealing with counterfactual conditions applying to possible worlds different from the actual world. One may think of Gorgias' *On Nature* or *On What Is Not* as an instance.

548. 103b39-104a2.

549. A slip on Alexander's part, cf. on 34,17.

550. cf. on 57,18.

551. cf. 6,23-8, 18,33-4.

552. cf. 36,9.30; 40,19.24-31 above.

553. cf. 78,15.

554. The syntax of the Greek leaves no doubt that the oblique clause depends on 'indicating'.

555. As opposed to a foregone conclusion.

556. i.e. an utterance in question form.

557. i.e. one to which there is an approved answer.

558. The Greek adjective (*paradoxos*) means literally, and transparently, 'against <received, current> opinion(s)', as Alexander implicitly defines it at 78,27: '(a thesis is) "paradoxical" because it conflicts with common notions'. Applying to questions and arguments as well as propositions, it has a wider and less strictly logical sense than its modern derivative.

559. As we might say, an *attribute*.

560. i.e. when he introduces a proposition as the question to be answered.

561. *Top.* 1,1, 100a27ff.

562. Literally, as in the previous clause, 'such as', but the use of this relative pronoun does not imply that there are other, non-approved dialectical propositions.

563. i.e. the demonstrative ones.

564. *Top.* 1,10, 104a5-6, on which see Alexander 68,14-15. For 69,13-70,11 cf. Barnes et al. 58 n. 32.

565. And 'worth approving'. The characteristically Greek ambiguity of the adjective between being in fact approved and being worthy of approval saves the account from being circular.

566. At 79,1-7, with two of the same examples and three others.

567. Alexander will supply references at 72,24-30.

568. Alternatively, 'But surely'.

569. A more likely wording could be obtained by assuming that 'as follows: whether' (TOIOYTONEI) is a corruption, through partial haplography, of 'such as whether' (TOIOYTONOIONEI). The problem is that Greek uses the same word to mean both grammar and literacy, and the purport of Alexander's words is in any case that our answer to the question, whether grammar or literacy are one or more than one, depends on whether we think of it as the literacy bound up with one individual person as its subject or as something somehow supra-individual.

570. This could refer either to e.g. reading, writing, literary criticism (cf. the six parts (*merē*) listed in the second sentence of Dionysius Thrax's *Art of Grammar*) or, with activity limited to first actuality, the realisation of grammar as literacy in individual subjects, as envisaged in the alternative just considered in lines 17-19. The latter seems more likely, esp. in view of 116,22-4 'the dispositions charac-

teristic of the several branches of knowledge are acquired through the corresponding activities: we become literate by being active in the field of letters.'

571. 104a20-2.

572. The Greek does not distinguish between 'it is not required of us to harm our friends' and 'it is required of us not to harm our friends.'

573. The more specific and technical translation would be 'subject'; this would imply that Alexander analysed the Greek examples as \*'it is necessary that friends should benefit <friends>' rather than 'it is necessary to benefit friends' etc., which seems less likely than that he uses 'underlying' as a term which may apply to the direct object of, i.e. affected by, an action denoted by a verb (the *objectum affectum* of traditional grammar), as well as to its subject. This is quite compatible with the characteristically Aristotelian use of the term to denote what persists through a process of movement and change; it would be harder to extend the word 'underlie' to an effected object (*objectum effectum*, e.g. a bridge built) or an object internal to and contained in the action denoted by the verb (e.g. a balance or bargain struck).

574. And so subject terms.

575. 104a28-9.

576. i.e. if the claim that we *should* do so is approved; an instance of an ambivalence, both in the term 'approved' and in the construction of the infinitive substantivised by the article, between the real world and the propositional.

577. i.e. it being said of the opposite <of friends> that we should benefit them; cf. previous note.

578. Accepting Wallies' deletion of this clause, a repetition of 72,2-3 with change of 'for' into 'and' only.

579. To the two oppositions between the contraries friends vs. enemies, and benefiting vs. harming.

580. A sufficient condition.

581. Reading *enantion* with aBP rather than *enantion*. For the inverse change to Aristotle's text cf. on 104b24 in the lemma at 78,21 below.

582. i.e. their truth conditions are the same.

583. *Top.* 2.7, 112b27-113a19.

584. *De Int.* 14, 23b3-7.

585. For 'finding' see on 73,13 below.

586. The Greek expression *koinē doxa* implies a more positive valuation than the English 'common opinion' does; not because Greeks thought better of opinion but because they valued convictions and principles which are common and shared.

587. The 'finding' (*heuresis*) of what was said to be 'found' in 73,3; similarly at 90,21. The verb (*heuriskein*) does not distinguish between finding or discovery of what is waiting out there and invention of something new. As a translation the latter is conventional, esp. as applying to the finding of persuasive matter in rhetoric and of propositions to argue from as premisses in dialectic, but the basic notion of finding remains operative and underlies the metaphor of dialectical 'places' (*topoi*) just as it underlies the Greek expression for an inventor (*prōtos heuretēs* or 'first finder').

588. Reading *autē* rather than *hautē* – once again a question of interpreting punctuation which is unlikely to date back to Alexander.

589. At 70,15-25.

590. A *théorême* is literally an instance or product of (mental) inspection (or vision or contemplation); cf. 74,10 below, where it is made a cause of *theôria*, i.e. mental inspection and the resulting view of the nature of its object. In the present

context the inquiry is theoretical because it is conducted by argument, not observation.

**591.** i.e. on instances of choosing one thing and avoiding another.

**592.** Neither Aristotle nor Alexander explains the difference between the two alternatives last mentioned. The most natural understanding is perhaps that in the latter the many respond to a thesis not only proposed by intellectuals but on a subject they were the first to discuss.

**593.** Or ‘one can take “approved”’.

**594.** That of the early Peripatetics, i.e. besides Aristotle esp. Theophrastus and Eudemus, presumably: cf. on 39,10 above.

**595.** The text is suspect here. What seems clear is that Alexander in his paraphrase conveys that what is here called a theorem by Aristotle and explained as an inquiry by Alexander involves as its subject that which is called a ‘theorem’ in more ordinary usage.

**596.** The statement belongs at once to the object-language expounding dialectic and to the commentator’s meta-language explaining Aristotle’s text. The article primarily indicates that the phrase ‘about which either party’ is being quoted, i.e. not used but mentioned. This fits in with the predicate ‘indicates the type of investigation’. But the relative clause ‘which is what he says a dialectical problem is’ requires the phrase to serve as its antecedent, i.e. requires the article to stand at the same time for a pronoun (*touto*) in the object-language, ‘that (thing) about which’.

**597.** See note 592 (on lemma 104b1, lines 4-5).

**598.** i.e. disagreeing among themselves.

**599.** Presumably the subsets of ‘approved propositions’ listed in the words quoted at 74,6-8.

**600.** cf. on 73,25 above.

**601.** Presumably in the words quoted in 74,6-8; just conceivably the predicates.

**602.** cf. 63,13-5 above.

**603.** More explicitly, ‘these are the ones mentioned in the phrase “about which either (1) ...”’ etc., with each of the alternatives listed in this phrase counting as one such distinctive feature (or *aphorismos*). Cf. on 74,6 above.

**604.** i.e. the many – which one could not have guessed from the present quotation, in which Alexander mentions the many before the experts, had he not given them in the reverse order before. Which of the two is Aristotle’s is unclear; our text of him here itself has to be decided with the help of that of Alexander, who gives his identification of the grammatical subject at 77,6-8 below.

**605.** As opposed to goods that one is born with, but perhaps also to goods that can only be contemplated.

**606.** Or knowledge, or art; there is little to choose, because the aim of endeavours in this field is scientific knowledge.

**607.** cf. 94,8 quoting 104b2-3 on logic as instrumental, a tool; Praechter (1990) 66, Barnes et al. 41 n. 5.

**608.** i.e. which pairs of premisses yield a syllogism and which do not: for non-syllogistic (pseudo-) syllogisms and conjunctions (*sumplokai*) from which no conclusion can be deduced cf. 10,28-11,4 and 21,15-26 above; for syllogistic pairs (*suzugiai*), i.e. pairs of premisses from which a conclusion can be deduced, e.g. 76,3 and 95,14 below.

**609.** Choice and avoidance, truth and falsehood – just like the ‘things mentioned first’ in the next line.

**610.** Alexander just says ‘what <things> the dialectical problem is in’. Else-

where this prepositional phrase was interpreted as ‘consists of’; the present context recalls the use of the same preposition at 74,25.27. But it might also be interpreted as ‘what features it<s nature> resides in’: cf. the specifications of 75,4 and 19.

**611.** Both ‘attributed (them) to it’ and ‘added (them) to his account of it’, with a lack of distinction between object-language and meta-language recalling that noted at 74,6 above; similarly 81,14 below.

**612.** They ‘have this as something known from right there’, i.e. from the kind of propositions they are: ‘approved’ ones.

**613.** The wording is convoluted, the text may be corrupt but the gist is this: among propositions, the specific difference of dialectical propositions – the difference consisting in their being approved propositions – entails other properties. The same distinctions do not apply among problems; the reason for this is presumably that what makes a problem suitable for dialectical debate is *not* that one answer is more approved than the other.

**614.** cf. on 75,7.

**615.** The term *sunkatathesis* which Alexander uses is taken from the Stoic theory of knowledge; see Volait (1907) 98 and cf. on an associated term 77,7 below.

**616.** i.e. in favour of either of the alternatives of which the disjunction is composed.

**617.** And so imply each other mutually.

**618.** Or ‘unlimited’ (*apeiros*): temporally, as appears from 76,9.

**619.** cf. *Top.* 2.7, 112b28 with Alexander 181,12-185,14, and 71,22-72,30 above.

**620.** cf. on 74,32.

**621.** i.e. making up one’s mind, pronouncing definitely, rather just entertaining beliefs.

**622.** Both to his interlocutor and his audience, though not in the same way: the former has to be compelled regardless of whether he notices the danger of being caught in a contradiction, the latter have to be satisfied that the probability is not specious or spurious.

**623.** Or ‘with respect to’; but cf. 76,17 (there *pros* + acc., here *eis*) and on 82,19.

**624.** For *teleios* connoting at once completion and perfection cf. on 2,7 above.

**625.** i.e. it will no longer be a sphere if anything is added to or taken away from it (as a figure; variation of radius does of course affect size but not shape).

**626.** So do the Epicureans: an instance of some of the ‘knowledgeable’, but not the most ‘approved’, siding with the ‘many’, and so of the ‘knowledgeable’ holding contradictory and even contrary opinions among themselves.

**627.** ‘While agreeing that it is a good’, it is understood. This applies to the Peripatetics.

**628.** The Stoicks.

**629.** The adjective retains the original sense of ‘harmful’, ‘bad for’ someone or something; in the case of pleasure the soul in particular, according to the Platonists.

**630.** Effectively, the more obvious among questions of choice and avoidance, in particular the ranking order among goods.

**631.** i.e. syllogistic deductions. This is perhaps the one statement that does most towards justifying Kant’s appropriation of the term dialectic for the type of discourse which generates his antinomies. In the tradition deriving from him, the connection with ancient dialectic is lost, but Kant’s own use of the term in the *Critique* is still continuous with Greek and medieval uses. Its ambiguity can

ultimately be traced to differences between conceptions of the discipline in the Academy, Lyceum and Stoa. Cf. Van Ophuijsen (1999) 295-6.

632. i.e. on both sides of the question.

633. More precisely, 'in the way of a firm apprehension': the term for such an apprehension (*katalepsis*) is taken from the Stoic theory of knowledge, where it is associated with the term here translated 'come down on one ...' or '... on either side of the question': cf. on 75,28 above.

634. cf. on 74,15 above.

635. i.e. about it on both sides.

636. i.e. the kinds of dialectical problem.

637. Or: *among* the ones, i.e. the problems. The Greek 'in which' could mean either 'those in which' or 'among those in which'.

638. i.e. unargued.

639. Literally just 'either of those conflicting' (grammatically masculine, no doubt), which evokes a situation of one-to-one debate in which these parties – i.e. either the many and the experts, or factions within the class of experts, respectively – could each be represented by one disputant. The next sentence shows that we are here not yet discussing the dialectical situation as such, but the background of approved opinions and arguments against which the dialectical debate takes place: Alexander could have phrased the present sentence in analogy with the sequel as 'There one withholds assent because of persons lending their authority to either of the opposed views'. The sentence after that confirms this picture, but also brings out the ambiguity contained in 'bare assent without syllogism': one would expect the counterpart to be 'assent on the basis of syllogism', but it turns out to be 'no assent, because of (contrary) syllogism(s)'.

640. Alexander in passing explains Aristotle's *logos* as syllogistic inference, i.e. argument, rather than account.

641. i.e. whether the proposition offered as a problem in the form 'Whether or not?' is to receive an affirmative or a negative answer.

642. The Greek (*ekhontōn*) just means 'having, containing'; we might use a dispositional term like 'capable of, open to, susceptible to, being possible objects of'. The underlying assumption is the same realist one as with the term 'finding': what is there in the subject matter is what is for us to discover. This kind of usage alone should make us wary of regarding dialectical treatments of any subject as merely nominal and verbal.

643. One with the force of proof: a categorical, not a hypothetical one, cf. 2,6-7 above.

644. i.e. 'whether or not it is so', in the words of 77,26 (where see note).

645. Aristotle's answer that it is eternal is simply taken for granted by Alexander.

646. The paraphrase is not illuminating; presumably it is to be read as 'both this and the former are *formulations of what are* problems' or some such meta-language statement.

647. Alexander here exploits an ambiguity of the preposition *en* between 'in' and 'by (means of)' which belongs to the Greek of his age but not to that of Aristotle's.

648. For the operative contrast between proposition and problem in the relevant respect there is a neat parallel at 69,5.

649. An explanation of (dis)approved 'without qualification' (*haplōs*) as distinct from 'in a determinate way' or 'in a specified sense' (*hōrismenōs*) found at 549,22-550,1 below seems to apply here as well, whether or not that part of the commentary derives from Alexander: approved without qualification is what

accords with the opinion of the majority or of all, approved in a determinate way is what is said following this or that approved and esteemed person. Note two implications: (1) what is approved in a determinate way will at the same time be disapproved in a determinate way; (2) it is only in the case of being approved in a determinate way that the 'approval rate' or reputability of the proponent of the opinion comes to make a difference. It is of course of the essence of dialectical debate that just which opinions and which proponents count as approved, and in which way, is always subject to revision. Cf. on 83,24-5 below.

**650.** Wallies' suppletion is required by sense and syntax; the corruption is readily explained as a standard case of haplography.

**651.** A clear instance of the rating of the proposition being a consequence of that of the proponents: the knowledgeable are unequal in numbers to the many by implicit contrastive definition, but their prestige can make up for this.

**652.** And 'according to' (*kata* + acc.), 'for (their) philosophical quality, ability'. The Greek noun for 'philosophy' (*philosophia*) is secondary to that for 'philosopher' (*philosophos*), which itself is an adjective, 'philosophical' before becoming a noun.

**653.** Adopting Pacius' change of one letter (*enantion* into *enantión*), placing the contrariety in the (subject of the) thesis rather than in the argument, cf. Brunschwig (1967) 128 (cf. on 72,20 above). This however creates a discrepancy with Alexander's paraphrase at 81,14 below.

**654.** On common opinions cf. on 73,9, for paradoxes on 69,12 above.

**655.** The Stoics claimed that it is neither good nor bad, but 'indifferent'.

**656.** The same theses from Parmenides and Antisthenes and a different one from Heraclitus were given as examples of the thesis at 70,23-5.

**657.** i.e. in the context of this one phrase, *mention*; the argument rests on the fact that the same verb (*legein*) in Greek denotes both 'mentioning, referring to' and 'stating, claiming', and the noun (*logos*) derived from the same root, here translated 'account', denotes both an expression *referring* to a thing and one making a *predication* of that thing. Cf. on *legein, logos* above, 43,9.33, and below, 88,14.29; 95,14; 97,26; 107,30.

**658.** i.e. uses the expression properly referring to the thing.

**659.** i.e. one who now defends a thesis.

**660.** Of the original proponents of the thesis.

**661.** We might consider reading *ex hautou* rather than *ex autou*, cf. 94,24 where both *ex autôn* and *ex hautôn* have MS authority. Alexander may not have written the diacritical sign for aspiration which we transcribe as *h*, in which case the difference is not between two genuine variants but is just a matter of interpretation of what Alexander did in fact write.

**662.** See on this thesis Brunschwig (1967) 128-9.

**663.** Literally 'one of the things that are the case'; as we might say 'a genuine possibility'. Cf. on 80,31-32 below.

**664.** As man is.

**665.** i.e. privation: the schema presupposed is the analysis of motion and change in terms of matter, privation and form.

**666.** It may be considered whether MÊDE should be read – unless parallels are found in Alexander for MÊTE in what amounts to the second of two alternatives not following another MÊTE in the first. Wallies' index s.v. *oute* at any rate does not list any.

**667.** Just as it has been shown that it is not the case that the musical person becoming literate came to be the literate musical person.

**668.** i.e., presumably, there is no programme specifically training the musical person to become literate. If this is the correct interpretation, as the next two

clauses suggest, then one may consider reading ‘teaching the musical person literature’: a change of one letter, MOYSIKONGRAMMATIKÉNOYDEIS having become MOYSIKONGRAMMATIKONOYDEIS, the corruption easy to understand in the context.

**669.** In the Greek the word order is ‘for no one does insofar as he is musical become literate’, so that Alexander’s demonstratives indicating ‘that (near)’ and ‘that (far)’ in their usual interpretation as ‘former’ and ‘latter’ respectively would yield ‘from literate into musical’, the order hinted at in passing at 80,25. The context from 80,21 onward shows that he is reverting to this order, which has the literate person becoming musical – which was after all the more usual Greek curriculum. But perhaps his usage in the present clause is affected by a presupposition as though what a change is from is somehow ‘nearer’ than what it is a change into.

**670.** Just as Greek thinkers, or at least the earlier among them, did not systematically distinguish between ‘to be’ as a substantive verb signifying some sort of subsistence, i.e. ‘to be there’, and ‘to be *A*’ as a copulative verb used in predication, so they tended to conflate ‘to become *A*’ in the sense of acquiring some attribute, with ‘to become’ in the sense of coming into being from some state of relative non-being, as well as, in the tradition of Parmenides and Plato, in the sense of being in the nature of a process rather than a fully fledged reality. This complex of associations makes it problematic, and even undesirable, for a subject to be in the one class with respect to one predicate and in the other with respect to another.

**671.** Historically, by those whom these sophists were trying to discomfit; but it may be implied here that the question whether a thing is generated or eternal is logically prior to any of those addressed by the sophists.

**672.** i.e. without reference to this or that accidental property, or as substances.

**673.** The verb (*proūpérkhen*) is a compound of the one (*huparkhein*) usually translated ‘hold of’ and sometimes ‘belong to’ with the preverb (*pro*) ‘before’. In the present collocation with the participle adjunct ‘being literate’ it may be sufficient to take the latter as a ‘dominant’ participle, yielding ‘if it held of him beforehand that he was literate’. However, construed as here with a personal subject and a participle, the verb (*proūpérkhen*,) seems in addition to bear existential import, i.e. to connote that he was there beforehand, so ‘if he was there beforehand as being literate’, ‘as a literate person’.

**674.** *ex hypothesi*.

**675.** Taking the predicates (literate, musical) as the grammatical subject. If we take ‘these things’, literally ‘such things’, to refer to the (grammatical, musical) person, we can say: these things *come to be* like this in the same way that they *are* like this.

**676.** i.e. in their own right. I suspect that the first instance of ‘worth investigating’ (in the Greek literally ‘to be investigated’, *axia zêtēsôs einai*) is a gloss based on the continuation of the sentence. This assumption saves us from imputing to Alexander a gross misunderstanding of Aristotle: cf. next note.

**677.** Aristotle merely says that no one would believe these claims but for the argument offered to support them. We can allow Alexander to grasp this and be paraphrasing it, by punctuating not before but after ‘they may be believed’ (and translating *alla* by ‘yet’ rather than ‘but’, and rearranging word order). This would leave the words ‘<They are> for that reason worth investigating as a class’ to Alexander, who would be adding the point that the paradoxes are interesting from a logical point of view, regardless of plausibility in content, by which he offers a complement to Aristotle’s distinction of a class of problems ‘about which we do not have any argument, while they are matters of importance’ quoted at 77,25-7. The

fact that this, although possible, is syntactically somewhat strained, may either have motivated the misinterpretation which takes ‘worth investigating’ as the predicate all along and underlies what I take to be a gloss (see previous note), or might be due to the loss of a connecting particle after ‘they’ (*auta*) *ara* or with abbreviation (*aut*) *ara* (KAIAYTAARADIA or KAIAYTARADIA being reduced to KAIAYTADIA), or of a second *doxai an* ‘they may be believed’ (EINAIDOXAIANDOXAIAANKAIAUTADIA or DOXAIAANEINAIDOXAIAANKAIAUTADIA being reduced to EINAI-DOXAIAANKAIAUTADIA).

678. i.e. adds to his description of it, and so attributes to it, cf. on 75,7 above.

679. cf. on 104b24 above.

680. For the *hendiadys* or explicative ‘and’ see on 90,7 below.

681. cf. 80,5-13.

682. This statement.

683. For ‘paradoxical’ see n. 558 on *Top.* 104a10-11 (lemma at 69,12) and cf. on 83,13 below. The participle ‘opposing, opposed, opposite’ retains its local connotation, ‘lying, placed over and against’.

684. 104b12, on which 77,5ff.

685. 104b14-15, on which 77,25ff.

686. i.e. by ‘setting down’ or ‘laying down’, an act of human contrivance, and so by convention. Alexander suggests that the dialectical thesis is something artificially ‘posited’ in more or less the same way.

687. The Greek has the verb ‘to say, speak, argue’ (*legein*) followed by a preposition (*eis* + acc.) which could be interpreted as either ‘for’ or ‘against’ or neutrally as ‘with reference to’. For the preposition *pros* + acc. as subject to the same ambiguity see 83,30 below. Cf. 76,10 with note and 76,17.

688. ‘Subject’ and ‘underlying’ are both literal renderings of the participle *hypokeimenois* of the Greek verb *hypokeisthai*, which serves as the passive of *hypotithesthai* ‘to place under’, from which in turn derives the noun *hypothesis*, literally rendered ‘supposition’ or ‘foundation’, found in 82,20-1 and 23. Cf. 102,12.

689. Conjecturing DAIROYNTES for OIAITOYNTES ‘those who demand’. The article before ‘hypotheses’ seems inapposite; it could have arisen by diplography with variation, OYNTESYPO becoming OYNTESTASYPO, perhaps after the participle had been misread as belonging to a verb demanding a definite object. But none of this seems sufficient to heal the corruption.

690. For *ek parallēlou* said of two more or less synonymous (‘équivalents’) words, Moraux (1979) 136 n. 19 compares 220,14; 222,7; 224,14 and the anonymous commentator on *An. Post.* (Wallies CAG 13,3). Still, the expression seems to be particularly appropriate in the present context as pointing out that the thesis is here not marked as a species of the problem.

691. For ‘paradoxical’ of arguments rather than propositions see 81,16-17.

692. Arguably Alexander should have said ‘puts forward’ (*proballón*), with the verb correlated to the noun ‘problem’, rather than *proteinón* from the verb correlated to *protasis* ‘proposition, premiss’. Perhaps he is playing the devil’s advocate: the imaginary opponent has an interest in assimilating the controversial would-be problem to a proposition, because this helps to clear its proponent from the charge that he was questioning foregone conclusions in an amoral, non-committal or even subversive way. Alexander may actually be quoting such an opponent.

693. This sentence offers a prize illustration of the continuity between the dialectical and the moral-cum-social use of ‘approved’ and its contrary, which in the one type of context may be translated as ‘non-approved’, in the other as ‘disapproved’. Cf. on 78,19 above.

**694.** With 83,25-9 on the difference between proposition and problem cf. 94,23-4.

**695.** i.e. both for and against them: this is implicit in the rules of dialectic and agrees with the neutral value of the preposition *pros* + acc., which bears the sense of 'in relation to' without specifying the character of the relation involved. For an instance equivalent to 'against' in Ar., see on 86,31 below. For the comparable ambivalence of *eis* + acc. see on 82,19 above.

**696.** In 84,1.7 I take *ê* to be disjunctive 'or' rather than assertoric 'surely', but the alternative is not impossible.

**697.** i.e. impossible to decide, and therefore inadmissible.

**698.** i.e. 'whose <solution by means of a> demonstration <of one of the pair of contradictories of which the problem consists,> is ....' 'Demonstration' may not here be used in the strict sense, although it is reasonable to assume that for many of these problems demonstration is actually available and to many others nothing short of demonstration is going to provide an answer.

**699.** i.e. direct his dialectical efforts to.

**700.** The intended ambiguity is between being capable in the sense of having an organ and in that of having this organ at one's command.

**701.** Omitting *estin* with aP; the situation in D, described by Wallies as '(hair)esin e in ras<ura>' i.e. after something was erased, suggests *estin* started life as a misreading of the second half of *hairesin*.

**702.** At 100a2-3, on which 1,1-7,2, esp. 3,4-7, 5,20-7,2.

**703.** Literally 'common', i.e. in common between these subjects and others.

**704.** Omitting *te* with A.

**705.** Literally 'more common', i.e. common to that and other things.

**706.** i.e. under the thing proved: the proof, i.e. display (cf. 86,12 and 14 below) of its nature in terms of what is predicable of it, is either through the genera above or through the specimens under it.

**707.** A negative formulation of the tenets that what is proved is proved through other things already agreed and that knowledge is derived from previous knowledge.

**708.** i.e. what has the same extension or is equivalent in meaning. Alexander stipulates that the first of the two types of proof just distinguished, that 'through something universal and <so> more general, should be taken to include proof through an equivalent term having the same extension, since this, while not *more* general, is still a universal. This interpretation does away with the need for Wallies' intrinsically suspect suppletion of a negative.

**709.** Induction is an ambiguous term in Aristotle. For the other main use cf. 87,6-14 below. Alexander here confirms the readings *tôn kath' hekasta* (plural: CDAcp) and *to katholou* (singular: CDAC) at *Topics* 105a13 (see Kapp (1942) 76 n. 1).

**710.** On 86,21-87,6 see Barnes et al. 104 n. 16.

**711.** 'Better-known' and 'more familiar': to us, as opposed to 'without qualification' (*haplôs* 435,22) or 'by nature' (*téi phusei* 437,3), 'by their own nature' (439,15). This appears from the context, which Alexander actually paraphrases in such a way that 'to the many' comes to qualify both 'well-known' and 'common (to)'. Cf. on 2,21.

**712.** Because there is no end of them.

**713.** i.e. the particular case 'for whose sake you employ induction' (86,28-9).

**714.** Objecting too is an art, or a part of the respondent's art. Four species of objection are listed at *Top.* 8.10, 161a1-15, and 8.2, 157a35 assigns the questioner's right to demand (*apaitein*) a formal objection from an unwilling respondent.

Objecting is an exercise we can do on our own, cf. 2.2 110a11 ‘the objection will be an attack against (*epikheirêma pros* + acc.) the thesis’.

715. In the original and strict sense, cf. 10,15-16 above.

716. ‘and compelling’ brings out that ‘necessary’ is not used in the technical sense of logical necessity; the operative connotations are rather ‘constraining’ and ‘inescapable’.

717. i.e. it produces as its conclusion, and thereby proves the proposition at issue.

718. The ‘induction that is obtained’: i.e. the series of assumptions obtained that adds up to an inductive proof. Alternatively ‘(the induction that is) undertaken’: it may be that the simple verb is practically equivalent to its compound *paralambanein* ‘to employ’ used with the same subject in the counterpart to the present clause at 87,12-13; it is even conceivable that *para-* should be written here too.

719. Reading *tou* with the MSS, not *tōi* with Wallies; cf. *kharin tou* ‘for the sake of’ in the parallel clause which follows, and *kharin* in the clause which precedes.

720. The subject, the party who makes the concession, is not specified by the Greek (accusative singular), except to the extent that it cannot be identified with the ‘we’ (nominative plural) who use induction.

721. i.e. to the claims about particular instances which we have got him to concede previously.

722. Reading *ou tou to* for the transmitted *autoū*, rather than *ou tou* with Diels or *ou to* with Wallies.

723. Or, closer to etymology, ‘comprehended by the mind’ (*nous*). Alexander is referring to the process of grasping universals and so obtaining first principles, described at *An. Post.* 2.19. Contrast the use of discursive thought or reason (*dianoia*) referred to 5,22-23, 119,28-30.

724. Rather than ‘dialectic’, cf. 87,5-6.

725. Problem and proposition, 34,6-41,16 above.

726. At least after a number of preliminaries, at 1.4, 101b11-5, on which see 34,7ff. above.

727. i.e. a term is used.

728. Not with the arguments but with what these consist of, i.e. propositions. Cf. on 34,17.

729. For ‘phrases’ (*logoi*) in the sense of nominal phrases, compound naming or referring expressions, cf. *Top.* 1.5, 101b38-102a2 with Alexander 43,11-44,27 above.

730. By which they are different things, i.e. things belonging to different species: the specific differences (Latin *differentiae*).

731. Another quotation of the opening words of the *Topics*, cf. 85,6-7 with n.

732. Both the thing that is similar (to another thing) and what makes it similar; cf. on 88,28 below.

733. The substantivized adjective ‘the similar’ (plural) can denote both the (concrete, individual) things that resemble each other and the similarities between these things. For the singular see previous note.

734. i.e. if it is a referring expression (*onoma*), an account of any or every use of it will be a proposition; if it was already a proposition (*logos*) of some kind, distinguishing a number of uses will turn it into so many propositions.

735. Either the analysis of the statement used as an example, or the analysis contained in it of ‘what is to be chosen’, i.e. effectively = ‘from this division’. The latter makes the adjunct ‘if we have this proposition’ less otiose (on the former

reading 'have', interpreted in a pregnant sense, is the operative word) and yields a neat parallel with 89,2 'the dividing of "body"'.

736. Probably just 'having', '(armed) with', but conceivably 'if we have obtained it' (= *labentes*).

737. The Greek term (*logos*) implies reason as well.

738. The verb could be taken (1) in the stronger sense of having them granted, cf. 88,32 above with note, or (2) as translated, or (3) in the sense of 'we will have' (cf. 90,15 below). The choice between (2) and (3) depends on whether 'knowing the difference' (12-3) *entails* having at one's disposal the propositions stating this difference (19-20).

739. i.e. contingent truths. In a conception that Aristotle adopts from Plato and which can be traced to Parmenides, opinion and knowledge are not different dispositions relating to the same objects; they are constituted, and so distinguished, by their different objects.

740. cf. 59,3-5 above.

741. At 1.4 101b11, on which Alexander 34,7 ff.; but the preposition 'around' (*peri* + acc.) recalls 85,19.

742. As opposed to their forms or species (*eidē*) and their modes (*tropoi*) and figures (*skhēmata*): 2,4-5 above. Cf. 119,8.

743. i.e., effectively, as there have been distinguished *varieties of* the proposition.

744. i.e. those expressing how things appear to be.

745. The antecedent is 'opinions', which is also implied as the subject of 'apparent'; at the same time Alexander is with the help of the verb 'propose' shifting (back: see a34) to the implied subject 'propositions' which he needs for 'them' in b4 to refer to.

746. The adjective *endoxois*, translated 'approved', is presupposed by Alexander's commentary and Boethius' translation, but is not found in all MSS and is rejected by Brunschwieg.

747. 104a13-4 on which see Alexander 71,22-5.

748. Alexander is speaking loosely: grammatically the antecedent is 'opinions', but the meaning requires 'producing <propositions> by collecting <opinions>.' Cf. on b2 above.

749. The remaining two senses, touch and smell. For Aristotle's efforts to make this thesis plausible for the sense of touch see *De Anima* 2.11, esp. 423b17-26.

750. The same phrase 96,26; the 'and' is that of explication, as at 81,15 above. Cf. 124,31-2 'places from which dialectical arguments take their departure' (*aphor-mai* again), 5,19 'places starting from which' (*aph' hōn hormōmenoī*, a phrase exploiting the etymology of the noun or at least based on the same image) and 26.

751. i.e. according to just as many criteria (alternative, not cumulative: sufficient conditions, not necessary ones) as we have distinguished for something to be such an approved proposition.

752. i.e. such propositions.

753. Literally 'in use', cf. 90,19 below 'how we should use'. The contrast is between what we 'have' (ready, available, at our disposal), i.e. are equipped with when entering the arena, and what we forge out of this in the heat of the actual debate.

754. At 105b1-3.

755. The propositions.

756. What appears to be approved as opposed to what is approved furnishes the matter of eristic as opposed to dialectic: 19,31-22,6 on 100b23-101a4 above. It is not implied that the interest here is in eristic, only that for the present purpose of obtaining plausible propositions by contradicting the contrary of a proposition

it is enough that the original one appears to be approved, whether or not it is so. Yet cf. on 92,18 below.

757. i.e. in the words 'by way of contradiction'.

758. In the weak sense of 'being supplied with', cf. 87,9 above, or even of 'employing, applying', cf. 87,12 above.

759. For 'finding' or 'discovering' cf. on 73,13 above. At 104a15 (above, lemma at 70,26) the passive participle was used in the present connection by Aristotle, but as an attribute of 'arts' rather than of 'opinions'. Sustained invention (*heuresis*) in dialectic adds up to the invention of special disciplines.

760. Not every practitioner of a discipline adds to its content; to do so is more prestigious than mere practice is.

761. 'In these fields' in this syntactical context would have required *en toutois*.

762. *Top.* 1.10 104a13-20, cf. Rose, *Pseud.* 127 (Wallies).

763. i.e. are subject to perception by the same sense organ, cf. on 96,11 below.

764. 105b5-6.

765. i.e. at once grasp all the cases of which the proposition does and does not hold, and catch the difference between these sets of cases under a general denominator.

766. i.e. frame them into a universal statement and get the respondent to concede this.

767. i.e. being answered affirmatively. More precisely, of what is conceded and posited; in other words in the wider sense discussed 82,18-26 above.

768. i.e. exceptions disproving the rule.

769. At 20,21-21,4 above. The Greek just says 'first', used substantively in virtue of the article. A noun such as *hypomnēmata* 'comments' might just conceivably be understood; in any case there is no indication as to whether Alexander is primarily addressing an audience or a reading public. The first is more likely, but 'primarily' is the operative word.

770. As Aristotle claimed at *Top.* 8.2, 157b23-4. The verb (*sunepiphorein*) is used of implication as early as *Top.* 6.6, 144b17-18, but in the present extensional context there is reason to press the metaphor.

771. To be distinguished from pairs of premisses, cf. e.g. 21,6-15; 74,32 with n.

772. Or 'goes with, accompanies, attends'; the verb does not specify the relationship as temporal or natural or logical, nor as either involving or not involving a hierarchy.

773. On pairs of contraries see *Top.* 2.7, 113a12.

774. According to a theory of vision expounded in Plato, *Tim.* 67DE and reported in Theophrastus, *On the Senses* 86; cf. Aristotle *Top.* 1.15, 107b29-30 with 109,24-9 below; 3.5, 119a30-1; 4.2, 123a2; 7.3, 153a38-b1, and see Brunschwig (1967) 135.

775. In particular: the starting-point and principle of motion (*arkhē kinēseōs*).

776. With an ear pun: just conceivably, 'whose principle is not a heart'.

777. Or: Aristotle might say?

778. Or 'Actually'; in any case the next *ē* at 92,18 is disjunctive.

779. i.e. ask the respondent to answer them in the affirmative.

780. See on 91,13 above.

781. By which party? The respondent cannot well deny them; but it applies to the questioner too that there will be an opportunity for him to score a victory despite his own better understanding. Note that the lemma, i.e. Aristotle's text, contains the verb 'appear' (*phainesthai*) which smells of eristic: cf. on 90,18 above. The phrase and context recall 91,14-15 'even if what is said is not in truth so',

suggesting that the fact of its being untrue is in the present connection more important than the question to whom it may seem so.

782. Propositions, picking up on a34.

783. In Greek 'if any (thing)' is regularly used where we would say 'whatever', which would fit this clause. However, in the next clause Alexander distinguishes between the questions 'Whether there is anything which is contrary to the thing in question' and 'What it is that is contrary to it.'

784. cf. *An. Post.* 1.34, 89b10-1, where the mark is specified as the middle term.

785. cf. *Top.* 6.4, 142b1 – with a difference of one letter (*hēmerophanes*), perhaps more precisely 'appearing by day'.

786. cf. Barnes (1980b) 170.

787. See on 65,15 above.

788. i.e. categories.

789. Or possibly 'say this', i.e. what it is, 'about all of the good'.

790. Or 'about every good'.

791. i.e. note the names of the authors, if sufficiently well-known, next to their views. The Greek word translated 'opinion' in the context of dialectic, indeed owing to its use in this context, often denotes especially a received opinion or one carrying some authority, cf. on 73,9 above (on 'common' opinions).

792. i.e. 'divisions'. At 101a18 (Alexander 25,13) and 103a7 (Alexander 58,1) Aristotle uses 'species' (*eidē*) and 'divide into three' (*trikhēi diaireisthai*) in similar divisions, of syllogisms and of sameness or the same respectively. In the first of these contexts the term 'species' is appropriate insofar as specific differences are appended to a definition of the syllogism given previously (100a25-7). In the second passage the division presumably concerns first of all the expression 'the same'. For the present division the term 'part' seems relatively appropriate here insofar as no formal distinction is being made: the classes differ only in the subject matter and content of the propositions contained in them. On the antecedents in Aristotle of the Stoic tripartite division of philosophy see Praechter (1990) 66.

793. Although in b20-5 Aristotle is discussing propositions, still the form in which he gives all three of his examples, i.e. that of a question 'whether ... or ...', is that which at 1.4, 101b29-34 was assigned to problems.

794. *Top.* 1.11, 104b1-3, quoted by Alexander at 73,25-7.

795. For this use of the preposition *anti* + gen. cf. 32,10; 42,5-7 above and 115,25 below; for a distinction between the two expressions and a third one see on 93,21 above.

796. The Greek just has 'the physical', which does not distinguish between the problems and their subject.

797. And expertise (*empeiria*).

798. i.e. earlier, at *Top.* 1.11, 104b3.

799. At 94,28-95,12.

800. *protitheis* or *prostheis* 'putting in front', 'having put in front' suits the sense better than the transmitted *prostitheis* and *prostheis* 'adding', 'having added'. With the longer form, *protitheis*, the misreading or loss of one or two letters is readily explained. Cf. on 34,16 and Greek-English Index s.v. *protithenai*.

801. Aristotle did not use these very words. This might be a slip on Alexander's part, but the complex and obscure syntax suggests corruption.

802. cf. 83,25-9 above.

803. The differences 'of', i.e. between these species, but probably, in view of the sequel, also between varieties within these species.

804. At 94,14.

805. The distinction may be compared with that which Kant makes between

judgments belonging to metaphysics and metaphysical judgments properly so called (*Prolegomena* § 2, Akademie-Ausgabe IV 273)

806. i.e. of the solution to it.

807. The implied metaphor is that of taking part in athletic games, and the implied contrast is with doing so for the sake of material gain: not for the honour of victory but for the prize.

808. Less probably, *in physics* (Sharples (1983) 120).

809. i.e. that the relations in which one thing stands to others belong to the nature of the first thing. Just conceivably, ‘that relations are at the same time by nature’.

810. i.e. that of every pair of contradictory statements one is true and one false. The possibility of a meaningless statement is not considered, presumably because it would not be regarded as a statement at all; cf. the Greek idiom ‘to say, tell nothing’ (*ouden legein*) for talking nonsense, and the general tendency in ancient philosophy at least until the Stoics to assimilate saying something to naming. Nor are claims considered which are partially true, or true in some respect (*secundum quid*). What is primarily envisaged seems to be that if a statement is true then its contradictory is false, and vice versa. Cf. 102,22 below.

811. cf. 21,6-15, 74,32 where see note, and 76,3; for pairs not of premisses but of contraries cf. 91,28-9.

812. i.e. each of the three classes of problems and propositions.

813. i.e., besides physics, mathematics (including astronomy) and metaphysics.

814. The Greek word translated ‘approved’ (*endoxôs*) is transparently related to that translated ‘opinion’ (*doxan*), cf. 18,29; 19,3.20; 20,23; 22,5-14; 70,2-25; 78,12-20 with notes above.

815. To be this or that, i.e. to have a form (which is called *possession*) and belong to a species, is the contrary of the lack of this form (called *privation*). Cf. 100,30 and on 102,17 below.

816. i.e. things in a relation, or in the category of relation.

817. i.e. subject to perception by the same sense organ, cf. on 90,30 above.

818. The MSS read ‘which cognition’; the noun may not be from Alexander’s hand but may have started life as a gloss.

819. i.e. with other species of opposed terms besides contraries.

820. The case seems only loosely parallel, if what Alexander has in mind is that blind and seeing are conditions of, rather than objects of the same faculty. That this is what he means to convey is suggested by the substitution of *gnôstikê* for *gnôsis*, which would be less appropriate to blindness as a lack of sense-perception but not necessarily of the sense-organ.

821. i.e. it is not enough to recognize and gather instances of each use that we distinguish; we have to come up with a formula characterizing each use.

822. Or ‘producing’, but the operative usage is that of producing an effect *in* something and thereby causing it *to be* so-and-so, in this case *good*.

823. cf. 90,7-8 with note.

824. Construing *diaphoron* predicatively with *apodosin*.

825. Either the things or, less probably, the different ways; but at 96,24-5 the word order in the Greek, ‘analyse and recognize’, suggests the recognizing is of these ways. There is little to choose between the two.

826. In the loose sense, as appears from 97,28-98,1 where one-to-one correspondence is explicitly denied, that whatever has a name has an account, and that any name can be replaced by some account (cf. 43,11-18 on 101b38-102a2 above, where the Greek for ‘account’ (*logos*) was more conveniently translated ‘phrase’).

827. i.e. two or more things have one and the same name but two or more different accounts.

828. In the ‘account of their essence’ mentioned in the opening sentence of the *Categories* just quoted, i.e. the definition.

829. cf. on 111,7.

830. There seems to be a contamination between ‘both if in name too and if in species only’ and ‘also if in name too and not in species only’: Alexander begins like Aristotle, then deviates in his effort to bring out that the parallelism in syntax does not reflect the semantic structure.

831. i.e. Greek ‘sharp’ as applied to vocal sound is equivalent to English ‘high’.

832. The species of things capable of bearing each of these qualities, and so the subject of which each of these words is predicated.

833. Both of Aristotle’s examples (opp. *low* and *blunt*); all of the examples if we include Alexander’s additional one (opp. *sweet*).

834. i.e. one of the ways in which it is *said*; and one *part* of it, i.e. of what it *is*.

835. The Greek phrase does not distinguish between (1) the expression ‘sharp’, (2) the quality of sharpness and (3) the sharp thing or things.

836. i.e. the Greek for ‘low’, in the context of vocal sound, is the proper word for ‘heavy’ in the context of mass.

837. English idioms do not reproduce exactly at once the ambiguity and the subject. The Greek *kalon* applies to what is good and is seen to be good, or in other words to that whose good appearance reflects its good internal constitution: in humans this may translate as beauty – the presupposition being that beauty is as a rule *not* only skin-deep – in actions as nobility, in artefacts as their being produced according to the rules and meeting with the requirements.

838. With 99,2-20, cf. 100,31-101,14; 181,21-187,9 (Sharples (1985) 112; (1990) 88).

839. cf. 99,18.

840. i.e. the derivation of two uses of ‘cowardice’ from its two contraries is not logically cogent and compelling.

841. The Greek has ‘white’ and ‘black’.

842. And critical instance. The Greek exploits a transparent etymological connection so as to assimilate, indeed identify the perception, or more generally the art, that is competent to discriminate and in this sense judge (*kritikē*) with the criterion (*kritérion*), i.e. means, test, measure or standard by which the discriminating (*krinein*) is done.

843. i.e. that certain terms are ambiguous, and so certain different things share the same name.

844. Not specified; the neuter excludes taking it to refer to ‘method’ at 99,29, but not to the rule given in the quotation from Aristotle at 99,30-1 or, more naturally, to its paraphrase ‘things which have different criteria are different things’ in 100,2-3.

845. It uses the same method as those exploiting contraries, even though no contrary is involved here.

846. The expression is ambiguous between ‘the contrary of either is also “dull”’ and ‘the contrary of either is also called dull’, i.e. between words and things.

847. Dimness, faintness, flatness, and so practically tastelessness. Perhaps Alexander varies the example because the application to taste is no longer current idiom in his day.

848. i.e. the ‘thing’ that turns out in fact to have a contrary in some uses and to lack one in others.

849. Of the same square.

850. cf. on 96,7 above and on 102,17 below.

851. i.e. substance.

852. For 100,31-101,14 see the reference in the note on 99,2-20.

853. More fully, is its contrary in all the ways in which it is used.

854. At 106a17.

855. By the present one. Cf. 103,14-16.

856. For one pair of contraries; similarly in b9 below. Less probably, for one of the ways in which a thing used in many ways is used. It is conceivable that *tōn* (genitive plural, yielding 'of the one pair') should be read in Aristotle, but there is no indication in Alexander that this is what Alexander in fact read, although Ross' apparatus seems to suggest this.

857. 'set out', i.e. put up for consideration. To 'look at' these is to consider to which type of contraries the terms used in a problem or proposition belong.

858. At this point the words '[do not. That these were different from each other]' have been bracketed by Wallies.

859. And, as often, the varieties they constitute.

860. i.e. as contradictory.

861. Literally a term 'underlying' those posited and thereby 'lying': cf. on 71,19; 82,21.

862. i.e. with the perception performed by each of the senses, cf. 100,1 and on 90,30 and 96,11-17 above.

863. And vice versa, as the next clause shows.

864. Some supplement is needed, but there is no good reason to suspect what the MSS have preserved and replace it with phrases more closely parallel to what precedes, as Wallies does, since Alexander's presentation of the case of perception is not parallel to that of eyesight anyway: see previous note. We could read *legetai gar <aisthanesthai kai to ekhein aisthēsin kai> to aisthanesthai tinos aisthētou di' aisthētēriou*, assuming that the corruption began with a jump from one *kai* to the next and was completed by the loss of this second *kai*, or a shade more subtly *legetai gar <aisthanesthai kai to ekhein aisthēsin kai> to antilambanesthai tinos aisthētou di' aisthētēriou* (cf. 103,1-3), assuming that the corruption originated in a jump from *aisthanesthai* to *to antilambanesthai* in which the former verb ended up with the article belonging to the latter. It is just conceivable that *aisthanesthai* always had the article, cf. 102,27 (though there the construction is different). This would turn the corruption into haplography pure and simple in either case, i.e. whether the original text contained *antilambanesthai* or another *aisthanesthai*.

865. cf. 100,31 above and 102,23 (lemma).

866. In the sequel to the lemma which follows, at 106b22-3.

867. Reading *ana meson* or just possibly *mesón* for the *amesôn* of some MSS and the *emmesôn* of another MS. Beyond this apparently sore spot it is safer to assume a slight anacolouthon than a deeper corruption.

868. cf. on 95,13 above.

869. This prepositional phrase is here exceptionally used to translate *kata* with the accusative.

870. Reading *hoti* 'that which (it is capable of possessing)' with A rather than *hote* 'when (it is capable of possessing it)'.

871. We might consider reading *ap'* rather than *ep'*, 'not depriving (the wall) of (perceiving) but (merely) negating (perceiving) of, to (the wall)', cf. Aristotle *Int. 17a25*, literally 'a negation is a statement of one thing away from (*apo*) another'.

872. 100,31-101,14.

873. i.e. quantity.

874. A far-fetched example, given the rarity of the verbal adjective *hektoς*.

875. Earlier Peripatetics and perhaps authors generally, as well as Aristotle himself: in the *Topics* also e.g. 2.9, 114a26-b5; 3.3, 118a34-39; 4.3, 124a10-14; 4.4, 124b35-125a13; 5.4, 133b36-134a4; 5.7, 136b15-32; SE 173b26-174a11.

876. e.g. the formal modification by which an adverb is derived from an adjective: 104,14.

877. i.e. to its extension, the class of objects which it denotes.

878. No longer the older Peripatetics, so presumably more recent authorities. An extant one, the unknown author referred to as the *Anonymus Seguerianus*, is dated later than Alexander and belongs to rhetoric rather than dialectic: cf. Van Ophuijsen (1994) 144-7.

879. In Greek these three have different endings.

880. As distinct both from the members of a set – of which they constitute a subspecies, cf. 105,6-8 – and from case forms in the earlier, wider sense.

881. Wallies supplies '<musical>' and brings the order of the adjectives 'brave' and 'prudent' in line with that of the adverbs in the previous line, supported in this by the paraphrase in the Souda lexicon; but the variation in the order is paralleled at 105,14-15 (and the order of the MSS at 104,14-15 itself at 106,5); and, once variation is allowed, an omission from such a list is hardly suspect. cf. 106,1-5, where Alexander repeats Aristotle's three examples and adds a fourth.

882. Inserting a full stop between 'just' and what is literally 'of the same kind too'. It may be asked whether 'lawful' (*nomimos*) is really subject to the same ambiguity: more precisely it denotes what is according to law and to custom, between which two there may be conflict. However, Alexander need not be looking further than the context of judging: if there are two ways in which a judgment may be called 'just', and a just judgment is lawful, then there are two ways in which judgments may be lawful; and so for any case forms and derivatives of 'lawful'.

883. Primarily ease of breathing, but the smell of the breath may be included.

884. Alexander now uses a preposition (*apo*) with the genitive for what a word is a case form *of*, rather than just the genitive as he did e.g. at 104,16-17.

885. i.e. the moment is what makes a thing good, and so 'good' signifies the moment.

886. A deletion proposed by Maguinness (1947), accepted by Brunschwig.

887. Greek has one verb *poiein* here translated by *acting, making* and *producing*, which makes the categorization more transparent, indeed self-evident.

888. i.e. quality.

889. The language is Platonic, cf. above 60,26-7.

890. i.e. of time.

891. i.e. of quantity.

892. The MSS read 'according to which a thing is said to be so much' or 'some such quantity', which would have to be understood as 'so much as is good'. I suspect we should read *toiouton*, 'according to which a thing is said to be so' (i.e. good). It is not surprising that coming after *poson kath' hoson* this should have been changed into *tosouton*.

893. Or, more technically, 'commensurable'.

894. i.e. of place.

895. Of predication, i.e. categories, cf. 66,23; 93,14 above.

896. Alexander treats this as equivalent to his previous statements of the form that the good is predicated *in* some category; cf. on 107,26 below.

897. i.e. white.

898. Of predication, i.e. category, cf. 66,23; 93,14 and 106,15 above.

899. Presumably the action and motion by which air is expelled from the mouth.

**900.** At 98,15ff. the same adjective was opposed, in the context of sound, to 'flat' and translated as 'sharp'.

**901.** Or perhaps more specifically 'arithmetical'.

**902.** The parallel is in the fact that volume, just like pitch, is a matter of quantity and of proportion.

**903.** cf. 108,21-5 below.

**904.** i.e. whether different things with the same name belong to different genera which cannot be arranged as genera and species of each other.

**905.** These words are missing in P and rejected by Brunschwig.

**906.** i.e. with the terms in it being taken without qualification and in their widest sense.

**907.** i.e. the topic is whether the things signified by the name are under different genera, where 'genera' is taken universally rather than used specifically of the highest kinds or categories.

**908.** i.e. the name: cf. 107,25-6.

**909.** The objects with their names.

**910.** i.e. is truly predicated; Alexander's semantics does not systematically distinguish between the subject and predicate terms in a proposition, or, in the Greek of Plato's *Sophist* and Aristotle's *De Interpretatione*, between *onoma* (name, hence both referring expression and noun) and *rhēma* (thing said (of a thing), hence both predicate and verb). Just as we here find a name designated as a bearer of truth, so in 107,28 a name is said to be predicated.

**911.** i.e. 'pronounces', 'expresses' (*eipein*). Cf. 108,5 below.

**912.** This verb 'to say' (*legein*) is ambivalent between uttering a word, mentioning a thing and predication or stating.

**913.** The chief metaphorical uses of the word in Greek which come under this genus are for a windlass or a millstone.

**914.** i.e. 'pronounces', 'expresses' (*eipein*), cf. on 107,30 above; yet not, as it seems, by articulating the word 'equipment' but by articulating the word 'mule' with the intention of mentioning a piece of equipment called by that name.

**915.** Metaphorical uses of the word for raven or crow in Greek which come under this genus are for various devices that are hook-shaped like the beak of these birds. It is not clear why, if not for variation's sake, Alexander should assign one thing to the genus equipment (*skeuos*) and the other to the genus instrument (*organon*); the general distinction that the first singles out artefacts whereas the other does not do so (cf. organ, organic) but focuses on the instrumental application of the object is not relevant here. Conceivably size and scale are.

**916.** i.e. from each other.

**916a.** In 98,4ff.

**917.** The Greek just has the article, 'and genus of the one is sound, of the second ...'. The anaphoric reference is vague: given the parallel between the genitives *tou men* ..., *tou de* ..., *tou de* ... here in 108,22 and the nominatives *to men* ..., *to de* ..., *to de* ... in 108,21 it is most likely to be to 'the things of which sharp is predicated' (*kath' hōn to oxu, tauta*) in 108,20, but it could be to 'vocal sound, a taste, and knife' in 108,21. This is plausible enough for the relation between sound (genus) and vocal sound or voice (species), cf. 106,29; with knife the choice is whether to accept that a concrete individual instance or specimen is immediately assigned to a genus rather than to a species, or to assume that knife itself is used as a species or form (in the ontological sense as well as in that of shape) common to any number of concrete knives. With taste we seem to have no choice but to accept the first alternative.

**918.** cf. 107,8-10 above.

919. i.e. for the term at issue to be univocal: b4-5.

920. Deleted by Brunschwig on the ground that it does not appear to have been in Alexander's copy.

921. i.e. in the case where 'indicate' applies and in that where 'produce' applies.

922. i.e., in more modern terminology, whether there are any differences in sense corresponding to the differences in reference.

923. The word does not preclude that the inquiry as a whole may involve more than two uses of a 'name'; it merely suggests that we carry it out step by step, comparing just two items at a time.

924. Greek uses a noun (*anthrōpos*) traditionally translated 'man', but has a separate one (*anér*) for man as male.

925. We can see how the noun (*aphairesis*) derived from this verb (*aphairein*) could come to denote 'abstraction': to subtract what is distinctive is to abstract what is common.

926. A category mistake, cf. 110,20 below. Alexander neglects the difference in status between the capacity and the bearer of the capacity. This may be related to the more general failure of philosophers in the Platonic and Aristotelian traditions to distinguish between a quality and the thing qualified by it: thus 'the brave' stands both for all who are and all that is brave, and for courage. Cf. e.g. on 98,22 and the variation between being proportionate (110,14 and 16-17) and that which is proportionate (110,20) below.

927. cf. 92,2.

928. i.e. arrived at in the course of a dialectical investigation.

929. Presumably equivalent to the composites of 110,8 below. But just possibly intended to remind us of the 'problems compounded in a sophistical and superficial way' of 84,21 above, and so preserving an Attic idiomatic use of *sunkeisthai* as 'be concocted', cf. LSJ s.v. II.3.

930. i.e. what deeper difference between two uses is hidden under one and the same surface expression.

931. cf. 104,28ff. above.

932. Alexander tries to analyse the single term in its context as a compound, an early instance of semantic componential analysis; cf. 110,14-5 with n. At 110,22-3 it becomes clear that the compounding (the Greek here has 'put together', there 'take one thing with another') involves more than addition: a fusion or conflation into one account.

933. The Greek just says 'the account of healthy'.

934. sc. for these several uses.

935. And thus implicitly the category of quantity.

936. Alexander varies between a *thing's being* in the right proportion (at 110,14.17) and *what is* in the right proportion (here): a fairly minor category switch – cf. on 109,13-14 above – which does not call for emendation of *ekhein* 'to be' to *ekhon* 'being' as proposed by Wallies at 110,14.17.

937. i.e. denoted as, referred to as being proportionate: Alexander envisages the extension of the class.

938. The one definition applying to all of it and to it alone.

939. Finding and judging are traditional tasks of the dialectician; cf. 27,31; 98,7 above, Cic. *Top.* 6-7, where the first is assigned to topics (*topikē*) and the second to dialectic, and *Or.* 44, where both are said to belong to wisdom (*prudentia*) rather than to eloquence; Van Ophuijsen (1994) 148-9.

940. Of the two Greek verbal adjectives, the first (*sumblēta*) may retain the notion of being measured against each other and commensurable, whereas the focus of the second (*sunkritika*) is on being the object of the same faculty of

discrimination or judgement. Thus the first continues the finding, the second the judging of the previous sentence. Here and at 111,19-20 one would expect, especially after *sumblēta*, the analogous form *sunkrita* which is more naturally given a passive interpretation, ‘comparable’, rather than *sunkritika* ‘comparative’ which would normally have an active sense and refer to a faculty, instance, means etc. which does the comparing, as at 92,2 above. Such uses as at 52,11 and 57,14 for ‘matters’ or ‘questions of comparison’ ease the transition to the present use.

941. As it stands this is a fallacy, but Alexander presumably expected us to take the antecedent as ‘seeing that all things that (and no other things than those that) partake of the same are comparable’. Similarly 113,5-6.

942. And so, as often, varieties; in the present section Alexander follows Aristotle in not systematically distinguishing between the specific difference and the species or variety differentiated by it, in spite of 113,19-30 below; cf. on 22,10; 63,24; 65,11; 94,27; 102,3 and 109,13-14 above.

943. *Cat.* 3 1b16-7.

944. For the point of the present topic, compare Alexander’s summary introducing the next one at 112,27-8.

945. In species.

946. Similarly 59,25 (Moraux (1979) 134 n. 1).

947. We could simply say ‘if’. Alexander conflates the basic form in which these topics are stated, (1) ‘if ... (a) ... then (a) is homonymous’, with (2) ‘it may happen that (a) is homonymous because ... (a) ...’ and (3) ‘sometimes it is possible to prove that (a) is homonymous by the fact that ... (a) ...’.

948. As in 111,19-20, Alexander has not given grounds for assuming that the statement converts; in the present instance we have to read the antecedent as ‘if it is distinctive, constitutive of, peculiar to different genera that they have different varieties’ or the like.

949. cf. 106,25-7 above.

950. See Ptolemy, *Harmonika* (*Die Harmonielehre*, ed. I. Düring, Göteborg 1930) I.29, conveniently accessible in A. Barker (ed.), *Greek Musical Writings II*, Cambridge 1989, pp. 302-3; and M.L. West, *Ancient Greek Music*, Oxford 1992, pp. 177-9, 188-9, 227 and 235. I am indebted to the late C.M.J. Sicking (Leiden University) for these references.

951. 2,2; 109,4.

952. *Non sequitur*; Alexander has omitted the premiss that ‘colour’ in song has as its species the same colours that colour in bodies has according to 113,7-8, or at least that white or bright (*leukon*) is common to both sets.

953. i.e. by (a, the) difference.

954. cf. 39,18 above.

955. And ‘noun’: more generally referring expression, cf. on 102 a 1 (n. 353) and on 107,26.

956. The Greek has the past tense ‘signified’, which either is due to the reference to a historical person from a distant past, or reveals to what extent Alexander assumes the role of interpreter of a text and mediator between author and audience rather than of a systematic expositor of doctrine.

957. The semi-legendary Sicilian founder around the middle of the fifth century, together with Teisias, of rhetoric.

958. I submit we should read (*ek tou koinou*) *idion* instead of *idiou*, literally ‘the distinctive property (*idion*) distinguished, in contradistinction to the genus, from that which is common <to all of the genre>’.

959. i.e. that something is ‘proper’ to (*idion*) or the ‘property’ of a thing is said both of all that distinguishes this thing from others, including the specific differ-

ence that goes into its definition, and of just that which is distinctive of it besides what is mentioned in its definition: see 37,23-25; 39,12-17 above.

960. 'Called' in the full sense: in Greek 'black' as a quasi-noun is the proper word for ink.

961. i.e. this fact may be revealed by the relations that it enters into; cf. 103,17ff. above.

962. The only grammatical antecedent is 'genera', but as to sense the subject is generalized to whatever items the differences happen to be differences of or between.

963. Literally just 'within each' (plural). There is no need for Alexander to state explicitly that the entities in question are genera, partly because Aristotle has done so – although Alexander is rarely deterred by this – partly because 'difference' in the special sense of specific difference naturally suggests genus as its antonym. Cf. 115,19 below.

964. More idiomatically, 'between', but in the Aristotelian perspective a difference is fundamentally an attribute of one subject, and is primarily considered in relation to the genus rather than to the co-species which it distinguishes this subject from.

965. And so of the genus; Alexander is thinking of the extension of the term in question, the members of the class.

966. The unspecified plural covers both the specific difference, i.e. the one distinguishing the species which is being defined from co-ordinate species within the proximate genus, and the differences 'of', i.e. constituting, this genus and higher genera.

967. At 88,19-22.

968. At 108a18-b31, on which 119,3-124,29 below.

969. At 90,7-96,21 and 96,25-114,22.

970. The Greek, literally 'supposes' (*hypothetai*), carries the connotation of 'laying as a foundation'. Cf. on 82,21 and 102,12 above.

971. The Greek has an unspecified 'within each' (plural); we can think of genera, cf. on 114,26, but species are not excluded.

972. cf. below, 116,11; 117,12-13.16 on Ar. 108a12-13; 124,3 on 108b23.

973. After the plural in the previous clause, the singular suggests the fact of their being different, rather than the respect or respects in which they are different.

974. More fully, 'in distributions and in transactions involving the things distributed': 118,18-19. Transactions imply exchanges.

975. Whereas the distinction between knowledge and sense-perception based on their objects goes back to Plato (*Resp.* V,474B-VI,511E), the qualification 'also' suggests the more accommodating attitude towards the sensible world that is characteristic of the Aristotelian tradition. Cf. 116,29, where knowledge is said to be 'of things of the past and things of the future as well as of things of the present' – but not necessarily of things each of which belongs to all three.

976. i.e. contingent.

977. i.e. specific difference.

978. Above, 115,19-32.

979. I have not been able to trace this significant and striking phrase. For one half, that of elevating the particular to the general, one may compare Cicero, *Orator* 126 (W.W. Fortenbaugh in a personal communication) and Ar. *Rhet.* 2.20,1395a32-b11..

980. Literally 'common', both in the sense of wide-spread and of what is shared by different individuals, and here what emphasizes such common features.

981. Wallies brackets an instance of *ê* after *ti houtôs* 'what ... in this'. Some

MSS have the preceding clause begin with *ei* 'if' instead of *ê* 'either': the two conjunctions are easily confused both in reading and in hearing as pronounced in post-classical times. This could suggest the *ê* is both displaced and corrupted but not spurious and we should read *ei ti* 'whether anything', 'whatever' instead of *ti* 'what', a suggestion reinforced by the next clause 'for if' (such a thing, *or* this) 'is found'. Cf. also 118,10.

982. cf. 116,21.

983. The 'genus' (*genos*) looks suspect. It may well have started life as a marginal gloss specifying either *allo* or *tini*, if we assume that an original *genei* was misread as it was inserted into the text at the wrong place. Without it we have 'when we take something as being in some other thing'.

984. i.e. of the subjects they reside in, literally the things underlying them.

985. The Greek term is that translated 'by analogy' e.g. at 118,1.

986. The answerer, by an affirmative answer; the sequel (esp. a25) shows that Aristotle is concerned with the questioner's correct interpretation of the answerer's intentions in doing so.

987. 'it': both the proposition which he assents to and, in the context, his thought.

988. The use of the verb *eidenai* 'to know' in this context stays close to its etymological origin as the perfect tense from a verb root meaning 'to see'.

989. i.e. of the different senses conveyed by the same expression.

990. i.e. of doing it themselves.

991. And at the same time easy to know.

992. i.e. the components.

993. The material on which syllogistic form or configuration is imposed: cf. 1,19ff.; 90,3.

994. cf. 120,15-16.

995. For the questioner as being identical with the syllogizer here and, more explicitly, 120,11-12 below cf. *An. Pr.* 1.1, 24a16-b14.

996. By being specified.

997. The first part is that quoted in the lemma, the second that quoted at 119,19-20. Cf. on 120,1 above.

998. i.e. the respondent does not concede propositions in which a term is taken in a different sense from the one it had in the problem to which he gave, and thereby undertook to defend, the affirmative answer.

999. The verb (*parakrouein*) means to 'hit sideways', hence to 'knock off balance', off one's feet or at least off course. The medium is found from classical times onwards in the sense of 'deceiving' (cf. the use of the active, found in a lexicon from late antiquity, 'of a wrestler, make a feint', LSJ s.v., VI). Its collocation with 'trapping in a fallacy' (*paralogizesthai*), found in Isocrates (first half of the fourth century BC), predates Aristotle's technical analysis of fallacies.

1000. cf. 84,23-5.

1001. i.e. expressed, mentioned.

1002. Or 'separate': the search for a definition begins with bringing out the object's distinctive features by contradistinction, contrasting it with others.

1003. cf. 103b15-16 and 115,14 above.

1004. i.e. the specific difference of each thing.

1005. At 115,4-6.

1006. Or 'the similar', i.e. what it is for one thing to be similar to another thing: cf. on 88,28 above.

1007. i.e. based on an agreed assumption. By the time of Alexander they had

already come to be called hypothetical syllogisms, as opposed to categorical: 2,7, 8,12; cf. 8,10.

**1008.** cf. 80,16-81,5 above.

**1009.** And comparing.

**1010.** i.e. here, cf. 122,16-17.

**1011.** i.e. a previous agreement between the respondent and ourselves.

**1012.** i.e. on our supposition.

**1013.** i.e. of substance.

**1014.** i.e. a principle of life, such as even plants have.

**1015.** The species, not the characteristics mentioned.

**1016.** In this paragraph as elsewhere, although the translation has freely supplied ‘things’ as subjects to Alexander’s ‘these’ (*toutōn* 22, *autōn* 16-17, 23-4) and various other pronouns, it helps to bear in mind that Alexander, like Aristotle, is speaking indiscriminately of whatever it is that nouns and substantivized adjectives refer to – indeed, that he does not maintain the distinction between referring expressions and what they refer to.

**1017.** i.e. these attributes.

**1018.** Greek has a relatively free word order; Alexander is suggesting, not very plausibly, that ‘what is above all’ (*to malista*) could be construed retrogressively with ‘of the things common’ (*tōn koinōn*) to yield ‘what is most common’, rather than progressively with ‘predicated in the what-it-is’ (*en tōi ti esti katēgoroumenon*) to yield ‘what is predicated above all in the category of what a thing is’. The latter is in itself syntactically ambiguous between ‘more than anything else is’ and ‘more than it is anywhere else’, but only the first of these suits the context as to sense.

**1019.** ‘All’, i.e., trivially, all members of the genus; ‘the greater number’, since it includes at least one other species besides the one it is the genus of. (But see above on 42,24-5, which can be construed as referring to a coextensive genus and species.) Alternatively Alexander may be thinking of species rather than particulars, in which case *tois pleiosi* is ‘the plural number’, ‘the more-than-one <species>’.

**1020.** Cf. e.g. 117,20.

**1021.** i.e. that respect in which they are similar and the same.

**1022.** i.e. as in its substance.

**1023.** i.e. that substance.

**1024.** The term (*aphormē*) is that earlier used as a virtual synonym for ‘place’ (90,8 where see note, 96,26, 98,6 and 118,9), and applied non-technically to the ‘starting-point for an objection’ (86,31).

**1025.** i.e. in *Topics* book 1. De Pater (1968) 181 n. 8 brings out, and approves, Alexander’s implicit view that at 108b33 ‘the things mentioned (so far)’ (*ta lekh-thenta*) ‘may refer to Book One as a whole rather than to the instruments in particular’.

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# English-Greek Glossary

absurd: <i>atopos</i>	attacking argument: <i>epikheirêma</i>
abundance: <i>euporia</i>	attend (upon): <i>akolouthein</i>
according to the rules of the art: <i>tekhnikôs</i>	attend to: <i>parakolouthein</i>
account: <i>apodosis; logos</i>	attention: <i>epistasis</i>
acknowledge: <i>gnôrizein</i>	audience: <i>hoi akouontes</i>
activity: <i>ergeia</i>	available: <i>prokheiros</i>
actuality: <i>entelekheia</i>	avoidance: <i>phugê</i>
add: <i>prostithenai</i>	be a sign of: <i>phrazein</i>
addition: <i>prosthékê</i>	be active: <i>energein</i>
adjudication: <i>krisis; epikrisis</i>	be controversial: <i>amphidoxeisthai</i>
admire: <i>thaumazein</i>	be happy: <i>eudaimonein</i>
affective: <i>pathêtikos</i>	be one: <i>hénôsthai</i>
affirmative: <i>kataphatikos</i>	be opposite: <i>antikeisthai</i>
agree: <i>homologein</i>	be present in: <i>huparkhein</i>
aim: <i>skopos</i>	be redundant (of a premiss): <i>parelkein</i>
air: <i>pneuma</i>	be without perception: <i>anaisthêttein</i>
alter: <i>alloioun</i>	beginning: <i>arkhê</i>
alteration: <i>alloiôsis</i>	belief: <i>pistis</i>
amass: <i>athroizein</i>	believe: <i>pisteuein</i>
ambiguous: <i>amphibolos</i>	bestiality: <i>thériotês</i>
analogy: <i>analogia</i>	blind: <i>tuphos</i>
analyse: <i>diaireisthai</i>	body: <i>sôma</i>
analysis: <i>analusis, diairesis</i>	bring (on) with it: <i>sunepiphorein</i>
animate: <i>empsukhos</i>	bring together: <i>sunagein</i>
answer: <i>apokrisis</i>	bring under one heading: <i>sunkephalaioun</i>
apprehend: <i>antilambanesthai</i>	calmness of sea: <i>galênê</i>
apprehension: <i>antilépsis</i>	cancel: <i>anairein</i>
appropriate: <i>oikeios</i>	capacity: <i>dunamis</i>
approved: <i>endoxos</i>	carpenter: <i>tektôn</i>
argue (by question and answer): <i>dialogesthai</i>	case form: <i>ptôsis</i>
argument: <i>logos</i>	category: <i>katégoria, genos</i>
argumentative attack: <i>epikheirêsis</i>	category of quality: <i>poion</i>
arithmetic: <i>arithmêtikê</i>	cause to change direction: <i>metabibazein</i>
art: <i>tekhnê</i>	centre: <i>kentron</i>
ask: <i>erôtan</i>	chance: <i>tukhê</i>
aspire: <i>boulesthai</i>	change (in) place: <i>ameibein topon</i>
assertion: <i>apophansis</i>	change: <i>kinêsis</i>
assume: <i>lambanein</i>	choice: <i>hairesis</i>
assumption: <i>lêmma</i>	choose: <i>proaireisthai</i>
astronomy: <i>astronomia</i>	
attack by argument: <i>epikheirein</i>	

circumscribe: *perigraphein*  
 circumscription (of (semi)circle):  
     *perigraphê*  
 civic: *politikos*  
 claim: *axioun*  
 clarity: *saphêneia*  
 class: *sunousia*  
 classify: *suntassein*  
 classify under: *hypotassein*  
 cognitive instance: *gnôstikê*  
 collect: *eklegein*  
 collecting (of propositions from  
     sources): *eklogê*  
 come down on one side of a question:  
     *sunkatatithesthai*  
 coming down on one side:  
     *sunkatathesis*  
 coming-to-be: *genesis*  
 common: *koinos*  
 common opinion: *koinê doxa*  
 communicate: *koinologeisthai*  
 community-spirited: *koinônikos*  
 compact: *athroos*  
 comparable: *sumblêtos*  
 comparison: *parabolé*; *sunkrisis*  
 complete: *teleios*  
 complete in itself: *autotelês*  
 completeness: *teleiôtês*  
 concede: *eikein*; *sunkhôrein*  
 conclude (of persons): *sumperainesthai*  
 conclusion: *sumperasma*  
 condensation: *sustolê*  
 condition: *hexis*  
 conditional: *sunêmmenon*  
 conflict: *makhê*  
 conjunction (of premisses): *sumplokê*  
 connate: *sumphutos*  
 constraining: *anankaios*  
 construction: *suntaxis*  
 contain: *periekhein*  
 contentious: *eristikos*  
 continually: *sunekhôs*  
 contradict: *antilegein*  
 contradiction: *antiphasis*  
 contrary: *enantios*  
 contribute: *sunergein*  
 controversial: *amphidoxos*  
 conventional: *sunêthês*  
 converse: *dialegesthai*  
 convert (propositions): *antistrephein*  
 cool: *psukhein* (v.)  
 counter-predicate: *antikatêgorein*

cowardice: *deilia*  
 criticize: *aitiasthai*  
 customary: *sunêthês*  
 cut up: *temnein*  
  
 deception: *paragôgê*  
 declaration: *apophansis*  
 decreasing: *phthisis*  
 deficiency: *enapoleipsis*  
 define: *horizein*  
 definition: *horismos*  
 delimit: *horizein*  
 demolish: *anairein*  
 demonstrate: *apodeiknunai*  
 demonstration: *apodeixis*  
 demonstrative: *apodeiktikos*  
 denial: *anairesis*  
 deny: *anairein*  
 determinate: *aphôrismenos*  
 determination: *diorismos*  
 determine: *diorizein*  
 diagnosis: *sêmeiôsis*  
 diagram: *katagraphê*  
 dialectic: *dialektikê*  
 dialectical argument: *epikheirêma*  
 difference: *diaphora*  
 dimension: *diastasis*  
 disagree: *diaphônein*  
 disapproved: *adoxos*  
 discern: *ginôskein*  
 discernment: *gnôsis*  
 discipline: *tekhnê*  
 discover: *heuriskein*  
 discredit: *diaballein*  
 discriminate: *krinein*  
 discuss preliminaries (of an art):  
     *protekhnologein*  
 disposition: *diathesis*; *hexis*  
 disproportion: *asummetria*  
 disprove: *anaskeuazein*  
 dispute: *amphisbêtésis* (n.)  
 dispute: *amphisbêtein* (v.)  
 dissoluteness: *akolasia*  
 distance: *diastêma*  
 distinct: *saphê*  
 distinctness: *saphêneia*  
 distinguish in opposition: *antidiairein*  
 distinguish: *diakrinein*  
 distinguishing mark: *aphorismos*  
 divide: *diairein*  
 divine: *theios*  
 division: *diairesis*

duties: *kathēkonta*  
elaborate: *exergazesthai*  
emotional: *pathētikos*  
employ: *paralambanein*  
encounter: *enteuxis*  
end: *telos*  
enmattered: *enulos*  
ensouled: *empsukhos*  
enthymeme: *enthumēma*  
equality: *isotēs*  
essence (of some subject): *ousia*  
establish: *kataballein, kataskeuazein*  
establishing: *kataskeuê* (n.)  
ethical: *ēthikos*  
evident: *enargēs*  
examination: *exetasis*  
examine: *exetazein, prokheirizesthai*  
example: *paradeigma*  
exceed: *hyperballein*  
excess: *hyperbolē*  
expedient: *sumpheron*  
expert: *sophos*  
explain: *exēgeisthai*  
explanatory: *aitios*  
extension: *epi pleion einai, diestēkenai*  
eyesight: *opsis*

fact: *pragma*  
fall under: *hypopiptein*  
fallacious inference: *paralogismos*  
fallacy: *paralogismos*  
false: *pseudēs*  
fate: *heimarmenē*  
female: *thēlus*  
figure (of syllogism): *skhēma*  
finding: *heuresis* (n.)  
fitness: *euxia*  
follow from one another:  
    *antakolouthein*  
follow: *hepesthai*  
form: *eidos*  
frame: *skhēmatizein* (v.)

gainsaying: *antilogia*  
generation: *genesis*  
generic: *genikos*  
genus: *genos*  
genus (of the same): *homogenēs*  
genus (of a different): *anomogenēs*  
geometrician: *geōmetrēs*  
geometry: *géometria*

get a supply of propositions: *euporein*  
goal: *telos*  
god: *theos*  
grammarian: *grammatikos*  
grant: *didonai*

habit(ual): *ethos*  
habituate: *sunethizein*  
happen accidentally: *sumbainein*  
happen to be: *tunkhanein*  
happiness: *eudaimonia*  
harmony: *harmonia*  
have a comprehensive view: *sunoran*  
heading: *kephalaion*  
health: *hugeia*  
heat: *thermainein* (v.)  
held in esteem (hence persuasive and  
authoritative): *endoxos*  
help: *sunairesthai*  
hold of: *huparkhein*  
hold at the same time: *sunuparkhein*  
homonymous: *homōnumos*  
homonymy: *homōnumia*  
hypothesis: *hypothesis*  
hypothesize: *hypothesthai*

immediate: *amesos*  
immobile: *akinētos*  
immortality: *athanasia*  
impact: *plēgē*  
imperfect: *atelēs*  
impulse: *rhopē*  
in outline: *tupōi*  
in perpetual motion: *aeikinētos*  
inclination: *prosklisis*  
include: *perilambanein*  
incomplete: *atelēs*  
incontinence: *akrasia*  
increase: *auxēsis*  
increase of tension: *epitasis*  
indemonstrable: *anapodeiktos*  
indicate: *deiknunai*  
indicate: *endeiknusthai*  
indifferent: *adiaphoros*  
indistinct: *asaphēs*  
individual: *atomos*  
indivisible: *adiairetos*  
induction: *epagôgē*  
inescapable: *anankaios*  
inexhaustible: *adiexitētos*  
infer inductively: *epagein*  
inference: *epiphora*

informative: *pusmatikê* (*erôtēsis*, question)  
 inquire: *epizêtein*  
 inquiry: *pragmateia*  
 inseparable: *akhôristos*  
 insight: *gnômê, phronêsis*  
 instruction: *didaskalia*  
 instrumental: *organikos*  
 intellect: *nous*  
 interchange: *epallassein*  
 interlocutor: *prosdialegomenos*  
 invent: *heuriskein*  
 investigate (further): *epizêtein*  
 investigation: *zêtêsis*  
 irrational: *alogos*

join (geom.): *epizeugnunai*  
 juror: *dikastês*  
 juxtaposition (hence comparison):  
*parathesis*

kind: *genos*  
 knock off balance: *parakrouesthai*  
 know beforehand: *proeidenai*  
 know: *eidenai*  
 know: *epistasthai*  
 knowledge: *gnôsis, epistêmê*  
 knowledgeable: *sophos*

lack of self-control: *akrasia*  
 last: *teleutaios*  
 laugh: *gelan*  
 lawful: *nomimos*  
 lay a foundation: *proüpoballein*  
 learning: *mathêsis*  
 lecture: *akroasis*  
 legislate: *nomothetein*  
 life-giving: *zôtikos*  
 limit: *peras*  
 linguistic custom: *sunêtheia*  
 listen: *akouein*  
 literacy: *grammatikê*  
 literate: *grammatikos*  
 living being: *zôion*  
 locomotion: *phora*  
 logical: *logikos*  
 love: *philein* (v.)

make clear: *dêloun*  
 make: *poiein*  
 manner of expression: *tropos tês ekphoras*

mark off: *aphorizein*  
 mark: *episêmainesthai*  
 mathematics: *mathêmata*  
 matter: *hulé*  
 mean: *sêmeainein*  
 meeting: *sunousia*  
 member of the same set: *sustoikhos*  
 memory: *mnêmê*  
 method: *hodos*  
 method: *methodos*  
 mislead: *paragein*  
 misplaced: *atopos*  
 mistaken (be): *hamartanein*  
 mode: *pathos, tropos*  
 momentum: *rhopê*  
 motionless: *akinêtos*  
 move: *kinein*  
 movement: *kinêsis*

name: *onoma*  
 name: *paronomazein*  
 named after: *parônimos*  
 narration: *diégêsis*  
 natural: *phusikos*  
 nature: *phusis*  
 necessary: *anankaios*  
 necessity: *anankê*  
 negating: *apophatikos*  
 negation: *apophasis*  
 negative statement: *apophasis*  
 non-different: *adiaphoros*  
 non-syllogistic: *asullogistos*  
 not approved: *adoxos*  
 not separated: *akhôristos*  
 note (v.): *episêmainesthai, paragraphein, parasêmainedesthai, sêmeioun*  
 notion: *ennoia*  
 noun: *onoma*  
 number: *arithmos*

object (raise an objection): *enistasthai*  
 object of controversy: *amphidoxein*  
 object of perception: *aisthêton*  
 objection: *enstasis*  
 obscure: *adélos*  
 observe: *têrein*  
 obtain: *lambanein, euporein*  
 offer a false construction:  
*pseudographein*  
 offer: *paradidonai*  
 omit: *paraleipein*

opinion: *doxa*  
 opinion, be of an: *doxazein*  
 optics: *optikē* (sc. *tekhnē*)  
 orator: *rhētōr*  
 organ: *morion*  
 outline (of content or a species):  
     *periokhē*  
 outline (n.): *hypotupôsis*  
 outline (v.): *periokhē*, *hypotupôsis*,  
     *tupōi apodidonai*

pair (of premisses): *suzugia*  
 paradoxical (i.e. going against  
     common notions): *paradoxos*  
 part: *meros*  
 participate: *metekhēin*  
 particular: *meros*, *kath' hekasta*  
 party in a law-suit (opponent or  
     adversary): *antidikos*  
 pass by: *parallassein*  
 passing away: *phthora*  
 perceive (by sense): *aisthanesthai*  
 persuasive: *pithanos*  
 philosopher: *philosophos*  
 philosophical: *philosophos*  
 philosophy: *philosophia*  
 place: *khōra*, *topos*  
 pleasure: *hēdonē*  
 point (in geometry): *stigmē*  
 point of departure: *aphormē*  
 point out: *deiknunai*  
 political: *politikos*  
 posit: *tithenai*  
 possession, state of possessing: *hexis*  
 possession, thing possessed: *ktēma*  
 posterior (causally or logically):  
     *husteros*  
 postulate: *axiōma* (n.)  
 potential: *dunamis*  
 practitioner of an art: *tekhnitēs*  
 precede: *proēgeisthai*  
 precept: *parangelma*  
 precision (of speech): *akribologia*  
 precision: *akribēia*  
 predicate: *katēgorein*  
 predication: *katēgoria*  
 premiss (with a single): *monolēmmatos*  
 premiss: *protasis*  
 preparation: *paraskeuē*  
 prepare (beforehand):  
     *proparaskeuazein*  
 preserve (use of syllogism): *sōizein*

presumption: *proeilēmmenos*  
 presumption: *prolep̄sis*  
 pretend: *prospoieisthai*  
 primarily: *proégoumenós*  
 principal: *kurios* (adj.)  
 privation: *sterésis*  
 probability: *eikos*  
 procedure: *methodos*  
 proceed: *proienai*  
 process: *genesis*  
 produce: *poiein*  
 progress: *proodos*  
 proof: *deixis*  
 property (distinctive): *idiōs*  
 proponent: *prostataēs*  
 proportion: *analogia*  
 proportion: *summetria*  
 proposition: *protasis*  
 propound: *proteinein*  
 provide a foundation: *sunistanai*  
 provide: *parekhein*  
 prudence: *phronēsis*  
 purpose: *prothesis*  
 pursue philosophy: *philosophein*  
 put forward: *proballein*  
 put together: *suntithenai*

quality of being beneficial: *ôpheleia*  
 quality: *poion*, *poiotēs*  
 quantity (as a category): *posotēs*  
 question: *erōtēma*, *erōtēsis*  
 question: *zētēma*  
 quibble: *philotimeisthai*

raise puzzles: *aporein*  
 rational: *logikos*  
 reach a conclusion (syllogism):  
     *perainein*

reason (with good): *eulogōs*  
 reasoning faculty: *dianoia*  
 recall: *mnēmoneuein*  
 receptive: *dektikos*  
 recognition: *gnōsis*  
 recognize: *ginōskein*, *gnōrizein*  
 reduce: *anagein*  
 refutation: *anaskeuē*, *elenkhos*  
 refute: *anaskeuazein*, *elenkhēin*  
 relation: *skhesis*  
 remain: *peritteuein*  
 render: *apodidonai*  
 rendering: *apodosis*  
 represent: *paristanai*

research: *zētein*  
 respondent: *apokrinomenos*  
 rhetorical: *rhētorikos*  
 sameness: *tautotēs*  
 sane: *sôphrōn*  
 sanity: *sôphrosunê*  
 science, scientific knowledge: *epistêmê*  
 search: *thera*  
 search: *zētein* (v.)  
 search: *zêtêsis* (n.)  
 self-control: *enkrateia*  
 self-evidence: *enargeia*  
 self-sufficient: *autarkês*  
 sensation: *aisthésis*  
 sense organ: *aisthétérion*  
 sense-perception: *aisthésis*  
 sensitive: *aisthêtikos*  
 separate: *khôrizein*  
 separate: *apokrinein*  
 share: *koinônein*  
 show (by examples): *endeiknusthai*  
 show (or prove) first: *prodeiknunai*  
 sign: *sêmeion*  
 signify: *sémainein*  
 signifying: *sémantikos*  
 similarity: *homoiotês*  
 simple: *haplous*  
 sketch: *hypographê*  
 solution: *lusis*  
 solve: *luein*  
 sophistic(al): *sophistikos*  
 soul: *psukhê*  
 sound: *psophos*  
 speak precisely: *akribologeisthai*  
 speak the truth: *alêtheuein*  
 species (of the same): *homoeidês*  
 species (of a different): *anomoeidês*  
 species: *eidos*  
 species-forming: *eidopoios*  
 speech: *logos*  
 spontaneous: *automatos*  
 starting-point: *aphormê; arkhê*  
 statement: *logos*  
 subdivision: *hypodiairesis*  
 subordinate (v.): *hypotassein*  
 subsume under: *hupagein*  
 suffice: *arkein*  
 superior: *hyperekhein, kreittôn einai*  
 suppose: *hypothesthai*  
 supposition: *hypolépsis*  
 syllogism: *sullogismos*

syllogistic: *sullogistikos*  
 syllogize: *sullogizesthai*  
 take away: *aphairein*  
 take together: *sullambanein*  
 take: *lambanein*  
 teach: *didaskein*  
 term: *horos*  
 theorem: *theôrêma*  
 theoretical study: *thèôria*  
 theoretical: *theôrêtikos*  
 theorize: *theôrein*  
 thesis: *thesis*  
 thing: *pragma*  
 think: *noein*  
 thought: *dianoia*  
 touch: *haphê*  
 train: *gumnazein*  
 training: *gumnesia*  
 transfer: *metapherein*  
 transform: *metalambanein (eis)*  
 transition: *metabasis*  
 treatise: *pragmateia*  
 trial: *peira*  
 truth: *alêtheia*  
 try: *peirasthai*  
 type: *tropos*  
 unclear: *aphanê*  
 underlie: *hupokeisthai*  
 understand: *akouein, sunienai*  
 understanding: *sunesis*  
 unfolding into simple factors: *exaplôsis*  
 unhappiness: *kakodaimonia*  
 unit: *monas*  
 universal: *katholikos*  
 universe: *kosmos*  
 unlearned: *amatê*  
 unlimited (in space or time): *apeiros*  
 unlimited (Theophr.): *aoristas*  
 untrue: *pseudê*  
 use: *khreia*  
 useful: *khrêsimos*  
 utter: *ekpherein*  
 utterance: *logos, ekphora*  
 verbal expression: *lexis*  
 vice: *kakia*  
 virtue: *aretê*  
 vocal sound, voice: *phônê*  
 void: *kenos*

waxing: <i>auxēsis</i>	without opinion(s): <i>adoxastos</i>
way: <i>tropos</i>	without redundancy: <i>aperittōs</i>
well-informed: <i>sophos</i>	word: <i>onoma</i>
what is untrue: <i>pseudos</i>	word: <i>rhēma</i>
without (sense) perception: <i>anaisthētos</i>	wording: <i>lexis</i>
without dimension: <i>adiastatos</i>	

# Greek-English Index

## Abbreviations

ant.: antonym  
Ar.: quotation from Aristotle  
ass.: associated with (in the context)  
def.: defined as, definition  
dist.: distinguished from  
ex.: examples, exemplified  
expl.: explained (by Al. as)  
geom.: geometry, geometrical

non-t.: non-technically  
O: object  
opp.: opposed to, opposite (in the context)  
S: subject  
syn.: synonym  
t.t.: technical term

***adélos***, obscure, 119,27  
***adiairetos***, indivisible, 31,30  
***adiaphoros***, non-different, 58,15;  
    indifferent, 76,26; ***adiaphorós***,  
    (*perainein*), (conclude)  
    non-differently, 10,8.10  
***adiastatos***, without dimension,  
    30,24; 31,9  
***adiexitétos***, ‘impossible to go  
    through’, inexhaustible, 86,27  
***adoxastos***, without opinion(s),  
    undecided, 73,19; 76,16  
***adoxos***, not approved, non-approved,  
    disapproved, 15,23; 22,4; 71,26;  
    78,19; 80,5; 83,23; opp. ***endoxos***  
***aeikinétos***, in perpetual motion, 45,24  
***agathon***, good, 18,34; 19,10; 62,22;  
    76,21; 89,5.6; 93,8; 97,8.12;  
    120,17-19; cf. 326,28  
***aisthanesthai***, perceive (by sense),  
    102,15-16.26-8; 103,4.8  
***aisthésis***, (sense) perception,  
    sensation, 6,25; 16,23-4; 71,5;  
    89,11.14-15; 90,30; 102,14;  
    103,23; 104,4; 114,19; 115,3;  
    116,12.16; 117,30; 118,5  
***aisthétérion***, sense organ, 102,16;  
    103,1.3  
***aisthétikos***, sensitive, capable of  
    sensation, 16,24; 17,9-11  
***aisthétón***, thing perceived, object of  
    perception, 86,24; 104,5

***aisthétos***, perceptible, 3,2; 28,12;  
    71,5; perceived  
***aitésis***, request, 40,27.29.30  
***atiasthai***, criticize, find fault with,  
    8,15  
***aitios***, (giving the) cause, reason,  
    explanatory, 16,14  
***akhóristos***, not separated,  
    inseparable, 17,15-16; 49,17.21;  
    50,11  
***akinétos***, motionless, unmoved,  
    immobile, 70,23  
***akouein***, listen, 28,29.30; 84,20;  
    understand, 71,8; ***hoi***  
***akouontes***, the audience, 19,26  
***akolasia***, dissoluteness, 44,12; 116,2;  
    117,10; 121,29  
***akolouthein***, attend (upon), follow  
    (from), 93,6; cf. ***hepesthai***,  
    ***parakolouthein***  
***akolouthos***, consistent with,  
    following (from), 73,7; 93,9;  
***akolouthós***, accordingly, 2,24;  
    3,6.26.27; 34,9; 73,29; 75,22; 119,4  
***akrasia***, lack of self-control,  
    incontinence, 44,12; 116,2;  
    117,10; 121,29  
***akribéia***, precision, 45,9  
***akribologeisthai***, speak precisely,  
    45,26; 71,8  
***akribología***, precision (of speech),  
    26,12; 51,15  
***akroasis***, lecture, 95,24; cf. ***sunousia***

**alētheia**, truth; 1,7; 74,25

**alēthēs**, true, 1,11; 2,20; 3,4.12-13.15-17.20.22; 5,29; 6,2.13; 8,27; 14,30; 15,22; 28,4; 95,20.26

**alētheuein**, speak the truth, 14,28; 15,1.3; 79,28; 107,26

**alloiōsis**, alteration, qualitative change, 96,21; 111,3

**alloioun**, alter, 21,20; 106,19; 120,27

**alogos**, irrational, brute, 6,7.8.10

**amathēs**, unlearned, 84,24.26-7

**ameibein topón**, change (in) place, 120,26; 121,5

**amesos**, immediate, 17,1; 18,16; 70,3; lacking an intermediate, (in logic) a middle term, 101,20-1.23

**amphibolos**, ambiguous, 96,29; 97,23.27

**amphidoxein**, (pass.) be controversial, an object of controversy, 69,3

**amphidoxos**, controversial, 37,4

**amphisbētein**, to dispute, 84,22

**amphisbétésis**, dispute, 117,9

**anagein**, reduce, 1,16.18; 37,22; 63,16; 106,27

**anairein**, deny (often connoting denial is well-grounded, e.g. 115,11, i.e. cancel, reject, demolish, destroy (claim to be), opp. *tithenai*), 12,22; 13,3.5-7; 50,1.5; 54,3.5-7; 55,13-14.17-19; 79,7; 80,15; 115,11; reject, discard, abolish, 10,1

**anairesis**, denial (way of denying, cancellation, rejection), 50,5; 54,6.26; 56,20

**anairetikos**, such as to deny, which denies, denying, 13,1,5; 55,11; tending to cancel (out), 101,1.7; 103,16; 123,4.5

**anaisthētein**, be without (sense) perception, 14,8.9.12; be without perception, 102,26; 103,2.4.7

**anaisthētos**, without (sense) perception, 14,13

**analogia**, analogy, proportion, *tauton kata analogian*, the same by analogy, 58,5.24.27; 115,29; 116,13; *homoiós echon kat' analogian*, similar, similarity, in a relation of similarity by analogy, 71,6.15; 104,3; 117,25.28; 118,1.20; **en arithmón analogiai**, in numerical proportion, 106,30

**analusis**, analysis, 42,27-8; 64,10

**anankaios**, necessary, 5,28; 9,8; 42,13; 105,5; constraining, inescapable, 86,25; 87,1

**anankē**, necessity, 7,23; 9,5.7-8; 48,22; 61,18.20-3; 99,5; 103,19; 107,27; **ex anankēs**, by necessity, necessarily, 13,21; 14,6

**anaphora, ekhein tén anaphoran**, have reference to, reduce to, 94,6.31; 95,9.10; **eis**, 74,17.19

**anapodeiktos**, indemonstrable, 16,7; 17,3.7; 19,25-7.29

**anaskeuastikos**, such as to refute, serving to refute, 54,30; 56,7-9.21

**anaskeuazein**, refute, disprove, 52,30; 54,9; 55,7; 56,14.19

**anaskeuē**, refutation, 54,31; 55,4.6.13.21-2; cf. **kataskeuē**

**andreia**, masculinity, manliness, courage, bravery, 99,4; 116,6-9; **andreios**, masculine, manly, courageous, brave, 21,8.11; 104,15-16; 105,14-15; 106,2; coat, 21,9; 84,25; 121,3

**anomoeidēs**, of a different species, 118,21.23; 123,27; cf. **homoeidēs**

**anomogenēs**, of a different genus, 116,10; 117,2.23.27; cf. **homogenēs**

**antakolouthein**, follow from one another, 75,29; 94,30

**antidiairein**, distinguish in opposition, contradistinguish, 82,15; 114,14-16

**antidikos**, party in a law-suit, opponent, adversary, 28,29

**antikatégoein**, to counter-predicate, predicate reciprocally, 38,14; 44,28; 45,19 (def.); 46,30; 63,27.28; 64,11-12.17-18; 65,1; cf. **katégorein**

**antikeisthai**, be opposed, opposite, 76,2; 102,6.17.22; 103,17;

**antikeimenos**, opposed (often by contradiction, e.g. the **apophasis**, negative statement opposed to a

***kataphasis***, affirmative statement), 96,18;

***antikeimenon***, opposite, 3,13.15; 4,17.20.21.22.24.25.28.30; 5,2.3.6; 98,6.17; 102,22

***antilambanesthai***, take hold of, apprehend, 103,1-2

***antilegein***, gainsay, contradict, 70,24; 79,6-7.9-11.13.15-16.18-19. 25-6; 87,2

***antilépsis***, apprehension, 91,5

***antilogia***, gainsaying, contradiction, 87,4

***antiphasis***, contradiction, 95,13; 96,17; i.e. contradictory pair, pair of contradictories, 3,21; 10,30; 36,23; 40,19; 77,14; 78,14; the problem encompasses a contradictory pair, 41,9; 83,18;

***meros tēs antiphaseōs***, 40,26; 41,2,10; 69,27; 75,28; ***morion tēs antiphaseōs***, part of the contradiction, one of a contradictory pair, 40,28; 83,23;

***erôtēsis antiphaseōs***, contradictory pair in question form, submitted as a question, 36,8.30; 40,24; 41,7; 68,29; pl. 63,6; cf. ***aitêsis***; ***kat'antiphasin proteinomena***, propounded by way of contradiction, in the negative, 71,22; 90,14.18-19, cf. ***apophatikôs***; opposed in the way of, by way of contradiction, as contradictories, 102,6.7.22

***antiphatikos***, ***antiphatikôs***, (as) contradictory, 12,6; 102,18

***antistrephēin***, to convert, 101,5; (pass.), 9,7; be convertible, 104,26

***antistrophos***, counterpart, 3,25.27

***aoristas***, (Theophr.) unlimited, 5,26; cf. ***apeiros***

***apeiros***, unlimited: in space, 30,16-18; in time, without end, 76,1; in number, 19,14; 34,21; cf. ***aoristas***; ***apeiron***, infinity, 76,28

***aperittós***, without redundancy, 43,3

***aphairein***, take away, 30,23; remove, (premiss from syllogism), 13,30; subtract, (from an account), 109,3.12; 110,11.24; pass. be deprived of, 62,11; 84,9; not 'to abstract' even at, 109,12; a taking away from, subtraction, 76,14; 109,21

***aphanés***, unclear, 9,25; opp. ***phaneros***; cf. (***a***)***saphê***, (***a***)***dêlos***

***aphôrismenos***, determinate, 3,29; 4,12; 5,4; ***aphôrismenôs***, (one of two opposites) determinately, 4,23-4

***aphorismos***, distinguishing mark, distinctive feature, 74,14

***aphorizein***, mark off, maintain a demarcation, 94,12;

***aphormê***, take-off, (point of) departure, start(ing-point), occasion, 86,31; 90,8; 96,26; 98,6; 118,9; 124,32; ass. ***topos***; cf. ***arkhê***

***apodeiknunai***, demonstrate, 17,17

***apodeiktikos***, demonstrative, 2,16.22; 3,1; 18,5.13; 22,16; 25,11; 26,8; 28,4; 29,7; 70,2; 73,14

***apodeixis***, demonstration, 2,22; 6,26; 10,27; 15,22.25; 16,1.3.16.26.29.31; 17,22; 18,3-5.10; 19,25; 78,3

***apodidonai***, to render, offer, give, 93,12; ***logon***, offer an account of, 8,14; 22,24; 25,21; 26,9; 49,17; 51,12; 54,10; 56,28; (by means of distinctive property), 43,5; (name in place of ***logos***), 44,4-5.16;

***horismos***, definition, 3,1; 25,16; 41,27; 44,4.14; 124,22, ***horos***, a reason, 43,17; 44,13; 77,11; explain, 41,24; convey, express (a thing's being numerically one), 61,5; deliver, yield (a product or effect), 10,23; definition in place of name, 43,13; in a definition, 54,12.14.16; as a definition, 54,16.18

***apodosis***, a giving, rendering, account, 43,2.11; 44,2.7; 49,1.5; 97,3.17; def., 123,13.18

***apokrinein***, to separate, 13,26; 36,27; 42,10; 51,14; ***apokrinomenos***, respondent, 119,20.29; ***apokrisis***, answer, 3,9; 20,5.9; 28,21; 36,18, cf. 36,10

***apophansis***, declaration, assertion, 5,10

**apophasis**, negation, negative statement, 71,23.25.27-8.30  
**apophatikos**, negative, 8,7; **apophatikós** (adv.), in the negative, 90,16  
**aporein**, have, raise puzzles, a puzzle, pass., be the object of or subject to a puzzle, 29,13.15.16; 68,21.26; 78,1  
**aporia**, (*ekhein*, involve a) puzzle, 77,11 Ar.  
**areté**, virtue, 19,11; 51,27; 70,8; 72,13.14; 75,29; 76,23; 93,8; 94,30; 95,4; 97,8.9; 114,15; 115,4.12; 116,4; 118,13-14  
**arithmétiké**, arithmetic, 22,21; 71,2  
**arithmos**, number, *arithmōi*, *kat' arithmon*, in number, numerically, 37,9; 58,8-61,24; 71,10-21; 76,17-19; 81,27; 106,27; 123,25  
**arkein**, be enough, suffice, 8,24; **arkeisthai**, content oneself, 51,16; 84,19; be contented, 41,5; cf. *autarkés*  
**arkhē**, beginning, starting-point, point of departure, 31,19; geom. (point, starting-point for first dimension), 31,20; in sense-perception, for knowledge, 116,30-1; 118,4; for demonstration, 3,2; 15,29; 16,7; hence, principle of a science, 3,30; 4,7; 5,5; 85,5; 91,11.14; 92,16-7; **epistémōniké**, scientific principle, 18,16.18-19; 29,24; to discuss these dialectician's task, 30,18; cf. *aphormē*; **kata tēn arkhén**, 89,31; *en arkhei*, at the outset, 87,19; *to en arkhei*  
**lambanein**, to beg the question, 10,15-16; **tēn arkhén**, to begin with, 6,28; 22,29; 28,5.7.15; 63,9; 73,19; 77,28; 79,14; 92,13.16  
**arkhesthai**, begin, 24,15;  
**arkhomenos**, at the beginning, outset (of a book) 1,5; 63,17  
**artios**, even, 71,2; 76,5.16.18.19; cf. *perittos*  
**asaphēs**, indistinct, 55,1.26.28  
**astronomia**, astronomy, 22,21

**asullogistos**, non-syllogistic, (would-be syllogism), 10,29; 11,4  
**asummetria**, disproportion, 99,10.19; cf. *summetros*  
**asustatos**, incapable of being provided with a foundation (therefore impossible to decide), 84,8; cf. *sunistanai*, *sustasis*, *kataskeuazein*  
**atelēs**, incomplete, imperfect (of syllogisms), 2,8; opp. *teleios*, incomplete pleasure, 2,27; 28,13; no good, incomplete, 2,27; 28,14; coming-to-be, incomplete process, 3,3  
**athanasia**, immortality, 76,27  
**athroizein**, to muster, amass, 92,21  
**athroos**, compact, 107,2  
**atomos**, individual, 1,18; 39,6; 60,24; *hē atomos* (originally sc. *phusis*), atom; 85,16-17; *hekastē* (sc. *grammatikē*) *tōn en tōi atomōi*, each of the individual instances of literacy, 71,18  
**atopos**, (having no place, 'neither here nor there') absurd, 46,5; 49,13  
**autarkēs**, (by itself) sufficient, 26,10 (for Ar.'s *hikanon*); 35,32; 42,20; 45,8; a sufficient condition, 72,14; cf. *arkein*  
**automatos**, spontaneous, *kopoi*, fatigues, 73,20; *to automaton*, what happens spontaneously, 115,32; opp. *tukhē*, chance  
**autotelēs**, complete in itself, 48,16ff.; cf. *teleios*, *telos*  
**auxēsis**, waxing, increase, 95,6; 96,21; 111,4, opp. *phthisis*  
**axiōma**, axiom, postulate, 18,21  
**axioun**, to claim (i.e. declare), 8,15; postulate, 122,28; 123,2.12; claim, demand, 5,27; 69,20.25; 83,20; 109,5; 115,27; 117,2  
**boulesthai**, (S impersonal), to purport, aspire, intend to (*einai* be), (S syllogism), 3,1; (S proposition), 69,3; (S expressions), 103a31; to have as its purport (S *periokhē* outline), 11,27  
**deiknunai**, point out, indicate, show, prove, (S impersonal), 9,4; (S an

argument), 83,9; (S induction), 122,24; (S personal), 68,6; in a book cited, 2,9; 6,16; 8,12; in words quoted, 37,14; by induction, 62,26; 120,25; 122,19.21; through deductive argument, 3,17; 4,2.7.19; 6,2.21; 8,1-3.16.27; 9,1-2; 28,14; 86,3-5; 120,10; syllogistically, 8,20; 9,2; (ass. *lambanein*, obtain), 3,30; 5,25; by hypothetical syllogisms, combining induction and syllogism, 122,28.31-2; 123,2-3.6.9-12; ass. *kataskeuazein*, 81,25; 83,9

**deiktikos**, such as to indicate, show, prove, 9,21; 23,10; 65,20; 103,10; (syllogism) probative, 2,6; 78,2; 80,13; cf. *deixis*

**deilia**, cowardice, 99,3; cf. 223,22-5

**deixis**, proof, 4,6.28; 9,3; 10,18; 13,15.28; 16,6; 55,11; 122,32; through induction and syllogism, 62,6; through induction, 62,29; 68,18; 86,19; ass. *zétésis*, inquiry, 68,20; ass. *pistis*, confirmation, 80,12; syllogistic and inductive, 86,2.6

**dekesthai**, receive, 27,9; admit, 76,14

**dektikos**, receptive to knowledge, 43,26-7; 45,24; to literacy, 45,28

**délótitikos**, serving to make plain, clear, point out, bring out, denote, 12,12.31; 13,9.18.22; 37,15.28; 38,24; 39,1; 42,3.4; 45,26; 49,27; 57,10; 58,11; 60,6; 74,6.12; 75,10; 87,27; 109,28

**déloun**, make plain, clear, point out, denote, (S personal), 7,21; 35,17; 83,17; 88,1; 90,17; bring out, bring across, indicate, convey, (S verbal), 38,22; 42,10; 45,21; 47,18; (S problem), (O predicate), Ar. 101b18; cf. *sémainein*, e.g. 66,28

**diaballein**, discredit, 101,13

**diairein**, divide, 106,22; (i.e. distinguish, analyse, cf. *diakrinein*), 1,17 (of Platonic division); of premiss, 14,25; 15,5.8.13; of kinds of problems, 37,21; of distinctive property, 39,15.22; 46,7; of genus into species, 46,13; 115,4.6; 96,9; theses, 82,23; of sameness, 58,6; of the question, 69,16; of homonyms, 119,18

**diairesis**, a dividing, division, distinguishing, analysis, 37,22; 38,25; 39,12.21; 53,26; 57,9.17.27; 59,5; 97,3.12; 115,17; 119,11.23; disjunction, 64,2; *ta en tēi*

**diairesei**, the disjuncts, 11,15.19.24

**diairetikos**, *diairetikē*, (method) of division, 1,14; disjunctive (syllogism), 11,1.18; 12,6; *to*

**diairetikon** (perhaps: sc. *lēmma*, assumption), disjunctive premiss, disjunction, 11,2-3.5.7-8.10.13.24

**diakeisthai**, be disposed, 18,32; cf.

**diathesis**

**diakrinein**, distinguish, 41,1; 57,3; cf. *diairein*

**diakritikos**, distinguishing, 92,2; 109,24.29; 113,13; opp. *sunkritikos*

**dialambanein**, (distinguish, analyse 141,12); discuss, 6,23 (cf. 141,12; *In An. Pr.*, 8,23; 12,23)

**dialegesthai**, to converse, 3,8 *bis*, esp. argue by question and answer, 27,8

**dialektikē**, dialectic; 1,7.9.10.19; 2,1.24; 3,5.7.8.22.24; 5,7.11.17; 6,17.18; 26,23.28; 32,16; 65,16

**dialekтикos**, dialectical, syllogism, 2,16.24; 7,7; 18,8.10-11.13; 19,3.8; 22,16; 25,10; argument, 35,13; 36,6.15.21; 67,31; 68,2.7; 88,3; 114,25; 117,5; 119,4.27; 121,15; problem, 6,24.27; 7,2; 36,24.27; 37,3.21.26.32; 38,1.7; 63,3.5.8; 82,22; 85,4; proposition, 19,21; 36,25.27; 37,3; 70,3; 84,3; question, 63,7; dialectician, 1,14; 4,3.7.11.17.28; 5,2; 6,12.16.23.24; 22,12; 23,6; 33,10; 37,6; 62,15; 68,17; 85,5; adv. *dialektikōs*, dialectically, 30,13; 31,21

**odialuein**, dissolve, 14,8

**dialusis**, dissolution, 14,11-12

**dianoia**, thought, reasoning faculty,

**ephistanai**, make attend, fix, focus; 5,23; **pherein**, bring to bear on, 119,29; cf. **nous**

**diapherein**, differ; 2,3.17.26; 5,7; 7,8.17.19; (of persons) **hoi**

**diapherontes**, be distinguished (in some field), 90,22; disagree, 78,17; 82,24; cf. **diaphora**

**diaphônein**, disagree, 100,13; Ar., 98,3.12

**diaphora**, difference, 2,3.5.18.29; 7,6.20; 53,28; 63,24; 89,12; 94,22; 99,22; 102,3; 110,6; 112,7.11.14.16; 117,12; 121,20; specific (**eidopoios**, 50,18) difference, *differentia*, 38,27.31; 39,3.4.6; 46,12.14; 47,14.16-18.20.23.29 def.; 31; 65,29.32; 66,1; ‘different in species’, 113,16, cf. 112,11; dist. from species, 113,20-2.24.26.29-30; dist. between difference in general and *differentia*, 48,1; difference in both senses in one context, 114,26-7; 115,1.5.10-11.14.16.18 etc.; often connotes the variety differentiated, esp. 22,10; 65,11; 102,3; 112,7.9.11; difference **kata tēn doxan**, in opinion 81,33; 112,5.13 Ar.

**diaphoros**, different, 2,13; dist. **heteros**, cf. **diapherein**

**diastasis**, dimension, 31,1.4.9-10

**diastatos**, having dimension, 109,28

**diastēma**, distance, between centre and circumference of a circle: radius, 23,16; dimension, 30,22; 31,14.17-18

**diathesis**, disposition, 45,22; cf. **diakeisthai; hēxis**

**diatonus**, diatonic scale, 113,10

**didaskalia**, teaching, instruction, 26,29; 116,21; opp. **phusei**, 118,4

**didaskein**, teach, instruct (in), 70,18; 80,27; 97,2; 99,29

**didonai**, (S respondent, O proposition) to grant, 14,11; cf. **sunkhōrein** concede, 3,18; pass. it is granted (to the respondent) + inf. **helesthai**, to choose (to defend the preferred contradictory), 40,25

**diégematiskos**, narrative (adj.), 7,25

**diégésis**, narration, 7,18

**diestôta**, (*diistanai*) (things) standing at a distance, **porrō**, 115,20, **polu (allélōn)** wide apart, 115,27; 116,11; **eph' hen**, **epi duo**, **epi tria** having one, two, three dimensions, 31,11; **diestôs trikhēi** having three dimensions; 31,1; 109,24; cf. **diastasis**

**diexodikos**, continuous (*logos* speech), 5,8.12

**dikaios**, just, 13,32; **dikaiosunê**, justice, 39,19; 114,15; 116,7.10; 118,16.18

**dikastês**, juror, judge, 9,13; 28,29; jury, 9,11

**diorismos**, determination, specification, 75,4.20; 110,1

**diorizein**, determine, 83,15; 119,13; i.e. specify, 120,6; **diorizesthai**, provide determinations, 57,21; **diôrismenos**, determinate, discrete, 22,21; cf. **horizein**, **hôrismenos**, **prosdiorizein**

**diphoroumenos**, duplicating, 10,7.29

**dittos**, **ditton**, duplicity (of meaning), 84,29; 96,29; 97,1; 119,16; cf. **pollakhōs**, **pleonakhōs**, **homônimos**

**dogma**, opinion, doctrine, tenet, 22,31

**dokein**, be reckoned, deemed, judged, held, thought (to), 20,23.24; 22,5.13.28; 23,13; 25,22; 28,8.17.19; 29,4; 63,21; 110,15; 115,29; cf. **doxa**

**doxa**, opinion, doctrine, 19,3; 28,21; 70,16-21; 73,3.8.18; 79,29; 80,1.7.10.12.14; 81,24; 89,17; 118,4-5; 105b16; common opinion, 81,15.32; **koinê**, common, 19,3; 73,9; 78,26; 80,8.14; cf. **prolépsis**

**doxazein**, be of an opinion, 19,6; 76,6.20.27; 77,20 Ar.; 78,8.11.13; 81,9.11; cf. **dokein**

**dunamis**, capacity, capability, ability, potential, power, 4,20.29-31.34; 5,1.7; 32,15.20; 103,25; 120,18-19;

**dunamei**, in potency, potential(lly), 103,23

**dunasthai**, be able, 1,15.17; be capable, 4,27.29-30.32-3; 5,2.24; **ison dunasthai**, (of expression) be equivalent, 35,27

**duskhrestos**, hard to use, 56,3.30-1; Ar., 55,1.28

**eidenai**, know, 26,30; 28,15; 38,20

**eidopoios**, productive of a species, species-forming, specific, 21,29; 50,18

**eidos**, form, species, 2,4; form, 21,13; opp. **hulē**, matter, 2,26; 17,4-5.7.13-16; 70,5; species, 26,1.5; opp. **genos**, genus, 1,17; 7,17; differing, being other in species, 7,19; 47,8.10-13.15.24; 111,1-2; 118,24; genus being cut up into species, 47,30; one, the same in species, 58,8.15-17.19-21.23; 71,20; 123,26; dist. difference, 113,20-6; 28-9

**eikein**, yield, concede, 28,21; cf. **didonai**, **sunkhōrein**

**eikos**, probability, 76,7; adv. **eikotōs**, with good reason, reasonably, plausibly, 3,7.25; 7,5; 25,31; 49,21; 60,11; 75,18; 113,5; probably, 60,9; cf. **eulogōs**

**ekbainein**, step outside, go beyond, 26,22

**ekhein**, **houtōs**, be so, be the case, be true, 79,19; **allōs**, be other, different, 89,19; +gen., be connected with, 52,20; 95,7; **peri** + acc, be concerned with, 19,7; have, possess (a good), 97,15; 103,28; cf. **hexis**

**eklegein**, to collect, 84,30; 88,18; 90,11.13.21; 93,13, cf. **eklogē**

**ekleipein**, be eclipsed, 16,9.13.28; 17,18-19; **ekleipsis**, eclipse, 11,15

**eklogē**, collecting (of propositions from sources), 88,16; 90,7; 92,26; 95,28; 119,6; cf. **eklegein**

**ekpherein**, to utter, also in writing, express, 42,28; use an expression, 42,2

**ekphora**, utterance, expression, **tas hopōsoun ... ekphoras**,

utterances formed in whichever way, i.e. differing in form but sharing the same underlying notion, 103,30; **tropos tēs**

**ekphoras**, manner of expression, 37,17; 40,18; 41,11.14; 62,28; 68,24, 69,9; cf. **prophora**

**ekpiptein**, to fall out from, to be cast out of, be expelled, excluded from among, 85,10; **tēs khreias**, lose its use, 10,3

**ektitheshai**, to set out, exhibit, make explicit, explain, expound, 27,26; 28,23; 29,18; 40,22; 65,10; 87,16; 100,18; 119,24; pass, 67,1 Ar.; of contraries, 101,22

**elenkhein**, (put to the test, hence usually) refute, 20,9.21

**elenkhos**, refutation, **ton elenkon poieisthai**, 22,13

**eleutheriotēs**, liberality, 117,10; 121,32

**ellipōs**, elliptically, 40,21; 41,6; 65,13

**emmesos**, having an intermediate, a middle term, 101,20-1.23

**empsukhos**, ensouled, animate, 43,22; 93,1; 109,25-6; 124,1

**enantiōsis**, contrariety, opposition between contraries, 72,1.4

**enapoleipsis**, deficiency, 50,22.24

**enargeia**, self-evidence, 84,6

**enargēs**, (clear, obvious), evident, 8,28; 9,13; 17,7-8.14; 71,9; 77,29; 83,24; adv. **enargōs**, 93,12

**endeiknusthai**, indicate, show, 49,1; 52,4; by examples, 65,17; 69,7; 81,22; 82,29; 95,15

**endein**, be defective, deficient, 43,1; 106,7

**endoxos**, approved, held in esteem (hence persuasive and authoritative), of persons, 90,12; 18,29 Ar.; (a thing) approved, reputable (of a proposition, statement), 2,25; 3,4.26; 5,26; 70,3; **protasis**, 6,5; 6,15-16; def. by Ar. 18,26-7; cf. 70,11-12; 19,23; 22,1; 36,32; 78,15.19; opp. **adoxos**; **endoxon poein**, make (a proposition) approved, 90,28; used as a noun, 2,23; 3,3.6.18-19.23; 4,6.9.16; 5,5.30;

6,3.14-15.21; 7,5.7; 19,5.22.25; 20,19; *ta aléthôs endoxa*, 21,31; 22,2; opp. *amphidoxoumenon*, *aporoumenon*, object of controversy, puzzlement, 69,5; 70,10.27; 69,12 Ar.; *endoxós* (adv.) *epikheirein*, offer as an approved argument, 32,23

**energeia**, activity, 33,13.25; 71,20-1; 110,27; 111,3 ass. *entelekheia*, actuality, 116,22-3; in act, 17,4

**energein**, be active (persons), 116,23; be actual (virtue), 122,2

**enistasthai**, object, raise an objection, 30,21; 115,7; cf.

**enstasis**, begin, embark upon, institute, 56,30; *enestôta*, things present, 116,29

**enkrateia**, self-control, 21,27; 44,12; 51,27; 115,3; 116,1; 117,10; 121,27

**ennoia**, notion, *hai phusikai kai koinai legomenai*, natural and common notions, 18,20

**enstasis**, objection, 86,31; *enstaseôs aphormê*, a starting-point, occasion for an objection, *dunamenê*, possible objection, 103,14; 115,6.8; 122,8; cf.

**enistasthai**

**entelekheia**, actuality, 111,3; ass. *energeia*, cf. *teleiotês*

**enteuxis**, encounter, 28,2

**enthymêma**, enthymeme, 9,9.16; 62,9; 86,7-8

**enulos**, enmattered, invested in matter, 17,14-15

**enuparkhein**, hold of, 54,15; cf. *huparkhein*

**epagein**, infer inductively, make an inductive inference, 115,8 (cf. 108b11); cf. *epiphorein*

**epagôgê**, induction, 10,17; 13,14; 30,3.29; 35,6.14; 62,7.9; 62,15.29.17; 66,30; 67,4; 85,28; 86,9; cf. *epaktikos*

**epakolouthein**, attend, 50,10; (ass. *akhórista sumbebékota*, inseparable accidentals), *pathos kai sumbebékos*, modification and accidental, of person, follow, 82,30; *têi khrêsei*, usage

**epaktikos**, inductive, *logos*,

argument, 35,6; 86,6.30; 115,6; 122,8; adv. *epaktikôs*, inductively, through induction, 92,18; cf. *epagein*

**epallassein**, interchange, treat (genus; species) as interchangeable, 39,10; have (legs) crossed, 84,20

**epekhein**, occupy, *khôran*, place, 61,9; suspend judgment, 77,23

**epexerkhesthai**, to go over, review, 86,27 ass. *adixitos*; 87,5

**epharmozein**, to fit, 22,24.34; 40,23

**epikheirein**, 'put hand to', attack by argument, produce attack argument, 4,5.17; 27,15.21.23; 28,27; 29,2; 32,23; 57,6; 88,32; argue, 76,10.17; 120,2

**epikheirêma**, means of argumentative attack, attacking argument, 27,20.24; 33,8; 83,30; 124,32; def. dialectical syllogism Ar. *Top.* 8.11, 162a16

**epikheirêmatikos**, such as to produce attack arguments against (of the method of dialectic), 32,10 ass. *zêtêtikê*, *exetastikê*, Ar.

**epikheirêsis**, argumentative attack(ing), 4,16; 27,10.11.15.18; 56,4; 84,8; 85,8

**epikrisis**, a judging, adjudication, 19,23-4.26; 34,9; 99,30; 111,7, cf. *krisis, heuresis*

**epiphaneia**, surface, 30,20.27; 31,12; cf. *epipedon*

**epiphorein**, 'bring on', cause to follow, esp. as a conclusion: i.e. infer, 9,30; 13,24.27; 14,3.29; continue, go on to say, add, 26,6; 34,16; 39,24; 40,11; 41,15; 54,29; 60,10; 62,3; 67,28; 81,25; 87,25; 94,16; 98,2; cf. *epagein*

**epiphora**, inference, 11,22

**episêmainesthai**, to note, mark, remark (verbally), 91,20; 93,25; cf. *sémeioun*

**episkeptesthai**, consider, study, 88,20 Ar.; 73,6; cf. *skeptesthai*

**episkopein**, look into, inspect, consider, study (Ar. 103b4), 83,22; 105,19.22; 113,19

**epistasis**, attention, 20,9; 84,15; 85,19; **brakheia epistasis**, a brief span, spell of attention, 20,9; 84,15; cf. **ephistanai**

**epistasthai**, know, have knowledge, 73,10; 86,16.18; **epistétos**, (such as to be) known, object of knowledge, 71,4; 103,23; 104,6; cf. **eidenai**

**epistêmê**, (scientific) knowledge, 4,27 (ass. **gnôsis**; opp. **aisthesis**); 71,4; 89,11.13.15-16; 90,29; 91,2-3; 115,3; 116,11-12 (species of **hypolépsis**); 116,14-15 (for judging); 116,17.19.21.23.26.29-31; 117,30; opp. **doxa**, 89,18.19; 115,2; science, 1,11; 3,29; 29,25; 100,24; ass. mathematics, 85,8; ass. art, 73,14.17; 80,27; 94,1; actual, potential, 103,22

**epistêmôn**, possessor, practitioner of a science, scientist, 30,6; 73,4.18; cf. **sophos**, **tekhnites**

**epistêmnikos**, yielding knowledge, scientific, 15,25; 18,16.23; principle, **logos**, account, 26,8; precision of speech, 26,12; **deixis**, proof, 29,27; 70,4; proposition, 124,29; **gnôsis**, knowledge, **epistêmnikós**, (adv.) scientifically, 29,25

**epitasis**, increase of tension, heightening, 59,19

**epitithenai**, impose order, **taxin**, 92,30

**epizétein**, inquire, 49,7; 50,6; 77,18; 83,17; 92,14; 101,1; 112,15; investigate (further), 16,25; 62,30; 115,28

**epizeugnunai**, geom., join, 23,17; 24,7; **epizeuxis**, a joining, 24,2.20

**éremaios**, calm, 107,3 (movement); mild 121,28 (desire)

**éremia**, calm, 118,15; cf. **galénê**, **nénemia**

**ergazesthai**, produce effect, 87,3

**ergon**, work, task, job, function, effect, product, 1,15; 3,20; 32,14.24; 33,1.2.14.24.27-8

**eristikos**, contentious, 2,16; 19,31; 22,17; 23,5; 70,3

**erôtan**, to ask, question, propound as a question, put in question form, submit, 8,18; 21,15; 69,17.20.24-5; 92,15.17; 120,16

**erôtêma**, question, thing asked, 37,18

**erôtésis**, question, an asking, 3,9.10.17; 5,8; 36,9-10; 40,29-31; 68,29; 69,12-15.19.22.24.26-7.29; 70,1.4.7.10.27; 73,2.; cf. **antiphasis**

**éthikos**, of ethics, ethical, 4,4; virtues, 115,12; problems, 74,17 def.; 94,2; 75,28 ex.; 6,20.22; 28,26; 63,14; 74,12-13; 93,29; 95,19

**ethos**, custom(ary), habit(ual), 39,10; 65,9; 74,3

**eudaimonein**, be happy, 34,4

**eudaimonia**, happiness, 19,13; 72,15; 93,9 def.

**euktikos**, pertaining to fitness, 71,3; 89,22.23.25; 97,7.10

**euexia**, fitness, 4,24; 20,23; 27,28-30; 89,22-5; 91,19-22.24 opp. **kakhexia**; 92,5-6

**eulogós**, with good reason, 41,14; 42,22; 57,26; 83,6; 89,31; 95,2; 97,21; 103,10; cf. **eikotós**

**euporein**, be equipped with, get a supply, stock of propositions, 5,26; 27,24; 34,17 Ar.; 35,11 Ar.; 68,1-2.6; 87,21 Ar.; 26; 88,10-11; 89,4.10.22; 90,2.16.17; 92,26; 96,2.5

**euporia**, (to have a) supply, stock, store, reservoir, plenty, abundance, wealth, 35,12.25.26; 68,7.13; 70,28; 83,30; 88,3.12.27; 89,8.30; 90,3.8.14; 114,25; 115,5; 117,5; 119,3.9; ass. **paraskeue**

**eusunoptos**, easy to survey, to grasp in a comprehensive view, **ekhousa horon eusunopton**, (method) defined along clear-cut lines, 57,4; cf. **sunoran**

**eutukhés**, adv. **eutukhós**, with good luck, 33,4

**exaplósis**, an unfolding into simple factors, 42,28

**exégeisthai**, explain, 47,26

**exergazesthai**, elaborate, 25,16

**exetasis**, examination, 95,21;

***exetazein***, to examine, test, 28,17; 69,24

***galénē***, calmness of sea, 59,3; 89,26.29; 118,15-16; 124,19.21-2; cf. ***nénemia, éremia***

***gelan***, to laugh, 46,4-6; ***gelastikos***, capable of laughter, laughing, 43,25; 45,24.27; 60,16

***genesis***, coming-to-be, generation, 95,6; 96,20; 111,4; 116,1; process 3,2.3; 28,12-13

***genikos***, of, belonging to, genus, generic, 38,26.27; 39,8; 45,11.12 Theophr.; 47,28; 48,2; 53,4; 62,22; 65,28

***genos***, genus, 1,17.18; dist. property and accidental, 37,23; dist. definition, 38,3; dist. difference and accidental, 63,29; dist. definition and difference, 65,29; interchanged with species, 39,9; predicated of the species, 42,18; division into species, 117,1; criterion, 47,14; differing in species, 58,25; differing in genus, 61,22; 117,16; 118,8; different and not under one another, 108,10 Ar.; genus, essence and quality, 66,3; genus and difference, 113,16; ***logos***, genus of syllogism, 7,15; class of things forming the object of a science, 3,29; cf.

***katégoria***

***géométrés***, geometer, geometrician, 4,8; 30,19; 73,11.13; 85,14; 86,17; 90,21

***geômetria***, geometry, 17,26; 22,20; 73,22; 85,4; 90,21.24; 94,1; 100,23

***geômetrikos***, geometrical, 4,4.8; 22,22; 23,13-14.19; 73,11; ***géometrikós, (de)iknunai*** prove), geometrically, 30,25

***gignesthai, ginesthai***, come to be, come into being, become, 40,8.17; 79,3; ***apo***, from, be based on, 61,29

***ginôskein***, discern, recognize, know, 115,16 differences; cf. ***gnôrizein***

***gnômê***, discretion, insight, 104,20.25

***gnôrimos***, recognized, acknowledged, ascertained, familiar, (well) known, i.e. intelligible, ***ex***

***h(e)autôn***, from itself, 16,7-8; ***tēi***

***phusei***, by nature, 16,7;

***gnôrimôterôn***, better-known, 2,21; more familiar (to us), 4,10; 8,24.26-7; 9,11.16; 18,26; 68,11.13.26; 69,2; 75,9; 81,8; 82,28; 84,12; 86,22; 119,21.32; 122,26; of persons, 70,15-16; cf. ***endoxos***

***gnôrizein***, to recognize, acknowledge, ascertain, discern, 26,11; 66,6.8.13; 88,13; 101,27; 114,3.7; cf. ***ginôschein***

***gnôsis***, discernment, (re)cognition, coming to know, knowledge, 15,27; 36,3; problems worthy of, 77,27.29; (ass. ***zêtêsis***) inquiry, 78,1); for ***gnôsis*** and, truth, dist. choice and avoidance, 85,20; of truth, 28,25; 74,24-5; opp. choice and avoidance, 74,20; 94,5; opp. what is to be chosen, 74,27-8; scientific, 28,24; ***logikê***, 124,28, dist. ***epistêmê***, of differences, virtues, 115,12; of essence, 122,7; of species, 123,25; of opposites, 4,21.25-7; of differences, 89,7; 114,26; 115,11; 122,3.9; of similarity, 117,6; of things said in many ways, 120,13.20; 121,20; of propositions, 15,30; of dialectical problems, 74,9-10; of topics, 27,20; cf. ***epignôsis***

***gnôstikos***, such as to discern, capable of discerning; 96,16; 116,18; ass. ***epignôstikos***, 116,19; ***kritika***, 116,14; 117,26

***grammatikos***, literate, grammarian, 80,18-26.28.31-3; 81,3-4; 116,24; grammatical, 116,24;

***grammatikê***, literacy, grammar, 45,28; 71,11.18

***grammê***, line, 30,20; 31,13.24

***graphein***, engrave, draw, 10,4; write, 92,9-11; 97,5

***gumnasia***, training, 27,8.11.19.25; 115,31

***gumnastikê***, training, 83,32; gymnastic, 71,3

***gumnazein***, to train, 27,15.10; 85,27; 115,18.30; ***gegumnasthai***, be well-trained, 29,14;

***gegumnasmenos***, versed, 106,25

**haireisthai**, choose, 6,6.8.10  
**hairesis**, choice, 18,33; 74,17.19; 95,24  
**hairetos**, to be chosen, object of choice, choiceworthy, preferable, 6,3; 70,8; 74,19; 81,11; 83,1; 89,1; 95,25  
**hamartanein**, be mistaken, faulty, 20,4; 21,13  
**haphe**, touch, (point of) contact, 24,16.18; 96,12  
**haplous**, simple, 62,11; adv. **haplōs**, simply, 8,22; absolutely, without qualification, 6,25; 8,11-13; 21,14; 53,9; 64,20.22.25; 65,1  
**harmonia**, harmony, 106,26-7; 113,10  
**hédoné**, pleasure, 2,28; 3,1-2; 6,1; 14,4-5; 28,12.15.19-20; 52,13; 74,20; 76,22.24; 77,13; 83,1; 94,32  
**hēgeisthai**, believe, take to be, 1,12; 8,29  
**heimarmenē**, fate, 76,27; 95,9  
**hēmikuklion**, semicircle, 23,18; 24,1.3.5.7.9-10.13.16-17.20.22.24-5; 25,2.5-6.8  
**hénosthai**, be one, 85,16  
**hepesthai**, to follow (from), attend (upon), esp. as an essential feature (of); (S person), follow, be guided by (opinion), 63,21; (S one of contraries), 91,28; 92,1; (S health), of natural consequence, **ex anankēs**, of physical necessity, 50,23; discernment, 4,26; from principles of mathematics, 23,14; in a quasi-analytic statement, 17,4; of logical consequence, 13,21.23; (S clause in direct speech), 8,25;  
**sullogistikōs**, dist. from **ex anankēs**, as a species of it, 9,5-7; **to hepomenon**, the consequent in a syllogism, 10,30; 63,26; cf. **akolouthein**  
**heteros**, other than, otherness, 60,25-6; 61,16.22; 100,3; 116,12; 121,17 Ar.  
**heterotés**, otherness, difference, 12,30  
**heuresis**, finding, 74,33; of dialectical arguments, 88,3; 117,5; of truth, 1,7; of the true, 29,11; 95,22; 28,24 id., ass. **gnōsis**, discernment, of things investigated and true, 27,25; of things true and false, 74,28; differences, 115,5; 88,28; of things said in many ways, 100,17; 114,5; 98,7; of homonyms, 102,5; of definitions, 123,13; genus, 123,17; 124,12; i.e. discovery, invention, 73,13  
**heuretikos**, such as to find, 29,10; for finding, **methodos**, 27,20; (of soul) apt at finding (truth), 27,31; **to heuretikon**, aptitude at finding; 27,15  
**heuriskein**, to find, discover, invent, 73,3; 90,21; 110,6  
**hexis**, having (an attribute), possession, 96,7.16; 102,17.23-4; 103,4.11.17 Ar.; 103,27; condition, disposition, 32,20; 33,24; 93,8; 110,21; cf. **diathesis**  
**hodos**, way, method, 33,13; cf. **methodos, proodos**  
**homoeidēs**, of the same species, 59,11.22; 60,22; 123,25; cf. **anomoeidēs**  
**homogenēs**, the same in genus, of one, the same genus, 115,28; 116,3; 117,19.22-3; 118,21  
**homoios**, similar(ity); 71,6; by analogy, 117,28.30; dist. in genus, 117,16; recognition of, 117,6; **théoria**, study of, 122,13  
**homoiotēs**, similarity, 91,6; 123,8.19; 88,15; **théra**, search for, 118,8; in species, 59,13; by analogy, 118,20; def. in a proportion, 58,25; 124,16  
**homolegin**, agree, 7,26; 8,3; 19,25; 36,7; 92,16-17; **homologia**, agreement, 122,17.30  
**homónumia**, (case of) homonymy, 12,30; 39,17; 110,18; 120,17  
**homônumas**, 'namesake', having the same name, homonymous, equivocal, def. 97,23; ass. **amphibola, pollakhōs**  
**legomena**, def. Ar. *Cat.*, 97,27; genus and species not homonymous, 97,26; (the word signifying them), 105,25; e.g. 'good', 106,15 Ar.; 'sharp', 107,11; what comes under different categories, 107,19; under

different genera in the same category, 107,22; e.g. 'donkey', 108,4; cf. ***pollakhôs legomenon***; e.g. 'crow', 30-1; name, 111,23; e.g. 'bright', 109,23

***horan***, see, 70,6; seeing a species of ***paskhein***, being affected, not ***poiein***, acting, 48,9-10; 91,8; ***horatos***, seen, visible, 45,2,5; ***horatikos***, capable of sight, having vision, 116,22

***horikos***, pertaining to, concerning definition, definitional, 54,32; 56,6; ***apodosis***, rendering, 44,7; inquiry, 48,3; 54,23; problem, 44,9; 54,25,29; 57,24; 62,21; 65,26; 66,2; 121,23; kinds (of problem), 54,21,22; problem or proposition, 66,6

***horismos***, definition, 38,9,12; 39,4; def. 41,10.21-2.24-9; 43,5; 45,17.19; 54,3; 55,18; 63,30; 65,26; 110,23; 115,14; esp. as including both *definiendum*, *definiens*, 3,2; Ar. 103b13-6

***horistikos***, such as, serving to define, definitional, 18,20

***horistos, to horiston***, thing defined, 42,2

***horizein***, delimit, of body, be delimited, pass. 30,15;

***hôrismenos***, delimited, 30,17; determined, 34,2; ***hodous***, definite methods, 33,12; ass. ***tetagmenas***, ordered, 32,17; 33,19.21; 34,2; of topic, 5,23; mark off, demarcate, 69,17; pass. 90,9; ***horizesthai***, define, 1,10; 3,6; 41,23; 65,27; cf. ***diôrismenos***

***horman, hormasthai***, start, *apo*, from, 5,19.26; 28,16; ***hormê***, impulse, 109,26-7

***horos***, term, 38,7; ***hypokeimenos***, underlying, subject term, 102,12; definition, esp. *definiens*, 7,10.14; 38,3.5.7; 41,7.8.22.25; def. 42,8.10; 43,2; 44,6; 63,29; 110,24; Ar. 103b10,18; ass. ***horismos***

***hugeia***, health, 51,28; 52,6-8.12.15; 105,5.7; 110,10-13.19; ***hugiazein***, heal, cure, 4,23; ***hugieinos***,

healthy, healthful, 104,28-9; 105,9.14; 110,7.9.15.18.20.25

***hulê***, matter, 2,5.12.15.17.29; 4,14; 5,7.11; 6,20; 10,23.26; 15,17.22; 17,4; 20,3; 21,5; 22,8.10; 36,3; 50,20; 60,24; 80,20-2; 85,16; 119,7; premiss of syllogisms, 90,3

***hupagein***, to bring, subsume under, pass. ***hupagesthai***, to come under, 30,10; 44,9; 51,20; 52,21.26; 55,25; 56,30; 57,11.24; 63,1.3; 81,13.22; 121,23

***hupallagê***, interchanging, 94,21-2; ***hupallassein***, to interchange, shift, 94,14

***hupallélos***, one under the other, 107,27

***huparkhein***, hold of, be present in, belong to, 8,9; 55,14; of things holding of a ***genos***, class of things, 3,30; of premisses, 11,13-14.16-18; def. accidental as what holds of a thing, 41,23, cf. 53,9; inseparably, 49,10; ***logos***, account of ***pragma***, thing, 54,10-12; ***huparxis***, a holding of, being present in, belonging to, being there, 48,26; ***huparxis***

***haplê***, without qualification, opp. manner of ***huparxis***, 53,8-9; of accidental, 55,12; cf.

***enuparkhein, proüparkschein, sunuparkhein***

***hyperballein***, exceed, be excessive, redundant, 43,1; 106,7;

***hyperbolê***, excess, ***psukhrotês***, cold, 50,22.25; opp. ***endein***

***hyperekhein***, be superior, 21,2; 103,24; pass. ***hyperekhesthai***, be inferior, 103,25; ***huperokhê***, superiority, 4,31

***hypodiairesis***, subdivision, 29,19

***hypographê***, sketch, 25,15; ass.

***tupos, hypotupôsis, periokhê***

***hypokeisthai***, underlie, be subject (to), be supposed,

***hypokeimenon, genos***, class of things forming the subject of an art, 3,31; opp.

***(anti)katêgoroumenon***, (counter) predicated, 64,19-20.21.23 Ar.; individual,

subject to health as his *teleiotēs*, completion, 118,14; to literacy, 71,19; *horos*, subject term, 72,3.5; 102,12; in explanation of term *hypothesis*, 82,21; cf. *hypotithesthai*

*hupoleipesthai*, be left over, 68,3

*hupolépsis*, supposition, 19,26; 79,30; 81,17.28-9; 115,9; 116,12

*hypomenein*, submit to, tolerate, 28,6; cf. *hypomonē*

*hypomimnēschein*, remind, 70,12;

*hypomnēma*, reminder, 7,11; 78,11

*hypomonē*, a submitting to, out-facing, 116,9; cf. *hypomenein*

*hupopiptein*, fall under, 22,27; 83,14; be subjected to, 33,6

*hypotassein*, order, arrange, classify under, subordinate to, 45,11; 55,26; 60,12; pass. 86,7

*hypothesis*, hypothesis, rhetorical, 82,20.23; *ex hypotheseōs* (syllogism), hypothetical, 122,15-16.27; *hypothetikos* (syllogism), 2,7; 8,12

*hypotithesthai*, to lay down, 96,25; 115,19; 118,9; to suppose, hypothesize, 8,10

*hypotupōsis*, outline, 26,9; cf. *tupos*

*husteros*, (causally, logically) posterior, 16,14-16.26; syn. *ta meta tauta*, what comes after, 16,4

*iatrikos*, of medicine, medical, 4,7; 33,5; 73,10.20; *iatrikē*, medicine, 32,15.26; 71,1; 85,3; 90,24

*idios, to idion*, (distinctive) property, 1,12; 4,9; 30,3; 39,12; 41,17; 43,5; 45,17; 46,26; 53,17-18; 55,14.19; 63,22; 66,18-19; 92,28; 117,18-19; *homonymous*, 37,23-5; 39,12.16; *onoma*, name, 114,8; adv. *idai*, on its own, 92,30-1; 95,15

*isos*, equal, *kat' arithmon*, in number, 37,9; cf. *to dunasthai*, equality, 116,9; *ep' isēs*, having the same extension, 38,9; 44,28; 47,1; 55,17-18; 56,19.26; 63,27-8; 64,8-4.20; 67,11; 82,9; cf. (*epi*) *pleon*, (*ep'*) *elatton*

*isostrophos*, corresponding; 3,27; cf. *antistrophos*

*isotēs*, equality, *kata analogian*, proportional, 118,17

*kairos*, moment, juncture, 5,14; 106,6

*kakhektein*, be unfit, 20,26; *kakhektēs*, unfit, 91,27; *kakhexia*, lack of fitness, unfitness, 20,24; 21,1.3; 91,19-21.24-6; 92,5-7

*kakia*, vice, 72,13-14

*kakodaimonia*, unhappiness, 72,14

*kataballein*, lay down, set up, establish, 83,13; cf. *proballein*

*kataginesthai*, move around, occupy oneself, be occupied, concerned with, 3,28; 23,7; 73,15

*katagraphē*, diagram, 23,16; cf. *hupographē*

*kataléptikōs*, definitely, 77,7; ass. *sunkatatithesthai*

*kataphatikos*, affirmative, 8,6-7; opp. *apophatikos*

*kataphilein*, cuddle, 100,29

*kataskeuastikos*, such as to, serving to establish, for establishing (apposition, view), 56,7.17.20.1; 57,7

*kataskeuazein*, to establish, 49,8; 55,8; 56,17.24-5.27; 57,5; 64,16; 81,24; 83,9

*kataskeuē*, establishing, 55,4.7-8; 56,10.12.22

*katégorein*, say, predicate, pass., of subject, 47,21; 64,20; of *pragma*, thing, 55,16; *allo allou*, def. accidental, 66,13; in the what-it-is, 67,4; genus, 7,16; synonymously, 7,15, and in the what-it-is, 7,20; species, 47,12; difference, 47,15.20; genus predicated in essence and what-it-is, 54,6; category, 105,22-4; *ep'isēs*, with the same extension, 55,18; opp. *kata pleionōn*, cf. 64,3-4; *haplōs*, without qualification, 64,22.25; 65,1; to *katégoroumenon*, predicate, 63,26; 64,3-4.6.8; definition, property, genus or accidental, 64,5-8.11-14

*katégoria*, predication, *tropon tēs*

***katēgorias***, mode of, 38,16; ***genē tēs katēgorias***, kinds of, 105,19; i.e. categories, 105,20; def. highest genera; ***katēgoroumenas***, predicated, 105,22; ***genē tēs katēgorias***, categories, 65,10.14, i.e. ten highest genera of things-that-are, 65,9; just called categories, 65,11.19; (kinds of) problems are in the categories, 67,23; study of, ass. genus of things-that-are, 67,24; cf. ***genos***

***katēgorikos***, such as to predicate (unconditionally, categorically), categorical syllogism, 64,2; opp. hypothetical, 2,6; the categorical being syllogisms in the strict sense and without qualification, 8,12; ***to katēgorikon***, the quality of being categorical, 8,8

***kathēkein***, ***kathēkonta***, duties and properties, subject of treatises by Stoics, 84,17; cf. ***prosēkein***

***katholikos***, universal, 5,9; ***katholou***, universally, 14,17; universal, 8,28; 14,19; 54,30 Ar.; 55,3.23; 55,24; ***to***, 13,17; 14,24.30; 15,7; ***ta***, 5,24; cf. ***holos***, ***holoklēros***, ***koinos***

***keisthai***, to have been, be laid down, posited, supposed, 30,15; 47,1; 84,31; 108,16; have been put, placed upon, imposed on, of name, 99,21; ***keimenon***, thing posited, supposition, 7,22-3 Ar.; the thing we set down, set out with, began with, 117,28; cf. ***tithenai***, ***prokeimenon***

***kenos***, void, empty (space), 8,25-6; 76,28

***kentron***, centre, 23,16

***kephalaion***, heading, 27,22

***khōra***, place, room, 63,26; 74,30; 81,15; 87,4-5

***khōris***, separate, apart from, without, 80,6; 116,28

***khōrizein***, set apart, separate (off), 6,18; 7,20.24; 13,11; 18,7; 41,26; 60,22; 75,4.20; 81,22

***khreia***, use, 9,25-6.28; 88,20; ***en tēi khreiai***, in practice, 90,16; there is a use, need for; 33,26; have a use, need for, 48,24; 86,29; ***khreiōdēs***, needful, 9,21

***khrésimos***, useful, practically effective, 9,21; 18,7; 19,4; 26,18; 27,19.24.27; 32,20; 44,32; 54,30; 55,8.20-1; 56,12.23; 57,20.22; 65,16; 67,24; 74,31; 88,17; to be used for, 92,25; 96,23; ***khrésis***, usage, 2,18; 34,14; 36,4; 40,23; 42,5; 82,30; 90,16; ***khrésthai***, to use, 10,27; 23,12; 44,22; 49,2; 75,15; 91,13; apply to, 112,18; ass. ***ópheleia***, ***sunétheia***, cf. ***proskhrésthai***

***khroa***, colour, 113,11; ***khróma***, colour, 45,3-4.6; 50,18; 105,2; 113,9-13

***khumos***, flavour, taste, 45,3; 98,16.21.24; 108,21-2.25

***kinein***, to move, 34,26; 43,32; 85,17; 107,4-5

***kinésis***, movement, motion, 69,18; 85,18; 95,6; 96,19-20; 103,27; 110,26.28; 111,4; ***kinétos***, (capable of being) moved, 110,27; 111,2; ***pollakhós***, said in many ways, 103,26

***koinologeisthai***, to communicate, 28,4

***koinônein***, to share, 89,17; 95,4; participate, 99,13; ***koinónikos***, community-spirited, 28,3

***koinos***, common, shared, 4,2.6.19; 5,4.24; 6,21; 28,16; 102,18; 123,23; general, 117,18; ***logos***, account, 26,9; ***doxa***, opinion, 73,9; 78,25; ***prolépsis***, notion, 73,16; 78,27; as a genus, in the generic sense, 37,25; 39,16; ***katholou***, ***endoxos***, cf. ***doxa***, ***prolépsis***

***kosmos***, world, cosmos, universe, 19,14; 69,28; 74,23; 76,1.9.11-13.15; 78,3

***krinein***, to discriminate, judge, 104,20-2

***krisis***, adjudication, assessment, estimate, judging, 22,5; 33,11; 98,7

***kritérion***, criterion, 100,3; ***kritikos***, apt to discriminate, critical,

(faculty) of judgment, 27,31; 71,5; 100,1; 116,14

**kuriōs**, principal, 5,24; 114,3; **kuriōtatos**, (most) authoritative, 15,24; strict, pure, 94,6; proper, **onoma**, name, 60,13; 61,11; adv. **kuriōs**, strictly (speaking), 8,9; 65,18; in the strict sense, 3,19; 4,29; 5,1; 8,11.13; 9,15; 37,3; 47,20; 48,27; 87,14; **kuriōtata**, in the strictest sense, 18,29; ass. **prôtos**

**lambanein**, take, thesis; 81,31; an individual as the subject, 39,6; how many ways to take the approved, 73,29; premiss together with a conditional, 8,31; take, begin with, geom. line, 24,2.21; opp. find, 101,5; of both opposites, 101,24; of an opposition, 72,1; of similars, 117,22; of species, ex. horse, human, dog, 123,18; assume in the question, ass. define, 69,19; take, adopt, use, ground for belief based on induction, 37,27; name for definition, 67,11; adopt, 65,17; take, get, form an image, 30,25; grasp, apprehend starting point, 5,22; difference, 2,18; kind, 66,15; genus, 123,16; from the questioning, 3,10.30; 5,25; 7,26; 8,2.5.9; 76,17; 80,16; 86,16; 88,7; 90,19; 92,18; 110,1; 115,8; prove through what has been obtained, 8,16; of co-assumption, 8,24; terms in def. not obtained through demonstration, 18,20; pass. be granted, 86,28.31; either assume or obtain, 6,3.6; both assume and obtain, opp. principle, 18,3; things held by all, 22,28; by some, 28,19; as following from principles, opp. held by others, 23,13; by a conclusion, 64,7; genus and difference, 65,30; by induction, 67,4; take, receive, be given, grounds for belief, 76,7; cf. **lêmma**, **lépsis**, **léptos**

**legein**, to state, **prothesis**, purpose, 1,5; claim, say, (S **logos**, account), **legôn**, saying (foll. by indirect speech), 49,8; (proposition) saying (foll. by direct speech); 17,6.9; (O *ti*, make a claim), that has a reference, is meaningful, 60,27; make a claim about, 79,21; express, (O **logon**, account), 79,20; express, say, ass. **sêmeinein**, 79,8-9; refer to, mean, 41,12; 81,6; speak, **eu**, well, 1,11; hold forth, argue, 79,10; **eis**, with reference to (problem) and against (thesis), 82,19; cf. **lexis**, **logos**

**leipein**, leave, be omitted, be lacking, 9,4; 13,27; 65,13

**lémma**, assumption, 10,11; of premiss, 23,21; def. answer to dialectical question, 36,19

**lépsis**, an obtaining, ass. **thesis**, 2,13; of universal, 86,29.32; 87,9; of what is common to similar things, 123,27

**léptos**, such as to be taken, acceptable, 83,2; dist. **hairetos**, cf. **lambanein**, **euporein**

**lexis**, an instance of saying: wording, choice of words, verbal expression, 11,8; 12,10-11.17.27.29; **skhêma tês lexeoôs**, form of wording, 10,20; 48,11; **tropos tês ekphorâs tês kata tén lexin**, manner of expression, 37,17; **kata tén ekphoran tropos kata tén lexin**, manner of verbal expression, 69,10; **to plérès**, the full form of, 65,23; 69,7; 84,29; 94,19-20; 119,26.31; 120,22; **epi têi lexei**, opp. **kata ta pragmata**, 94,20-2; cf. **legein**, **tropos**

**logikos**, endowed with speech and reason, rational, soul, 27,30; **zôion**, living being, 6,6.8.10; 43,25; rational being, 116,21; (S impersonal, unspecified), embedded in speech and argument, logical, opp. musical, ethical, 4,5; of theorems, problems and propositions, 6,23; 74,12-13.29; examples, 76,2;

93,29; 94,7.11; ***gnôsis***, discernment, 124,28; ***epistêmê***, science of logic, 28,26; ***pragmateia***, study of logic, 75,1; ***to logikon***, what is logical, said to be ***organikon***, instrumental, 94,8; adv. ***logikós***, (***krésimôn***, useful) logically, from a logical point of view, 95,29

***logistikos***, calculating, reasoning (faculty of soul), 75,30

***logos***, continuous speech, (of rhetoric), opp. in question and answer (of dialectic), 5,8.13.15; utterance, 8,30; 28,10; e.g. induction, 13,12; genus of syllogism, 7,9; 7,15; of other species, 7,19-21,24 Ar.; in def. syllogism, 7,22; compound of ***logoi***, 9,18; phrase, 43,28; about syllogisms, 20,1; about problems and propositions, 37,21; about genera, 65,30; about induction, 33,7; 86,1; applying to, 45,10; definition of, 8,15; of the ***pragma***, thing; 79,11.13-14. 17.20; that appropriate, peculiar to each thing signified, 97,16; that corresponding to a shared name, ass. species, 97,26; cf. 99,26; genus in def., 41,20.29; (formulation of) argument, 8,30; 9,4; dialectical, 37,7; 88,3.8; i.e. syllogism, 77,26; of those upholding theses, 79,28, cf. 80,8; syllogism and induction, highest genera of ***logos*** used in proofs, 86,2; speech and reason, 89,17; cf. ***logikos, legein***

***luein***, solve, refute, 103,14

***lusis***, solution, 29,15

***Magnétis, lithos***, stone (called) magnet, 63,2

***makhē***, conflict, 73,18; 77,21; 78,27; ***makhesthai***, to conflict, 70,16.19.22; 73,16; 77,21; 82,3.4; 93,10

***marturein***, bear witness to, 18,33

***mathêma, mathêmata***, mathematics, 85,8; 106,25;

***mathêmatikos***, mathematical, ***sôma***, body, 89,3.5

***mathêsis***, learning, 34,20

***megaloprepeia***, magnificence, 117,11; 121,32; dist.

***eleutheriotês***

***megas***, big, great, important, 78,1; ass. worth discerning, ***megethos***, magnitude, 30,22

***meizôn***, greater, esp. of ***protasis***, premiss having greater extension, major, 21,13.26

***meros***, part, point def. as what has no part, 30,21; of body, 118,18; of melody, 113,9; of (a concept), 101,12; of distinctive property, Ar. 101b21; of a ***kataphasis***, affirmation, 102,20; of ***logos***, argument, i.e. premiss, 15,10; of syllogism, 119,8; of syllogisms and inductions, 88,8-9; ***tês***

***antiphaseôs***, one of two contradictory premisses, 28,29; 40,26; 42,2.10; 69,28; of premisses and problems, i.e. classes, 93,21 Ar.; of problems, 83,21

***metabasis***, transition, shift, 115,32; 120,32;

***metabibazein***, cause to change direction, pass. 28,9

***metalambanein (eis)***, transform into, replace by, 8,5; pass. be substituted for, replace, 43,12; ***metalépsis, eis***, change into, substitution, 43,21; 44,6; 60,5; ***ek***, change from, substitution for, 57,12

***metapherein***, to transfer, 26,22; 41,24; 121,11; shift, 120,22-3; (term in dialectic) ***ep' allo ti***

***sêmainomenon***, give different meaning to, 3,23

***metekhein***, have a part in, of, partake of, participate in, 111,10.14.17-20

***methodos***, method, 1,4.14; 2,2.23; 3,5-7; 7,13; 27,29; 32,15 Ar.; 34,8; 37,22; 55,2.24; 68,1; 85,6; 97,20;

***metienai***, proceed, ***epi***, to, 34,11; 45,10; 96,26; 97,20; pursue, 35,31; cf. ***hodos, proodos***

***mnêmê***, memory, 116,31

***mnêmoneuein***, recall, 7,14; mention, remark, 52,19

**monas**, unit, 31,27-9.31; 58,27-59,1  
**monolémmatos**, with a single assumption, premiss, syllogisms, 8,17; arguments, 13,26  
**monomakhein**, engage in single combat, 120,34-5; 121,2-3  
**mousiké**, music; 71,3; 90,22.25; 94,1; 113,9; **mousikos**, of music, musical, 4,3.13; 80,18-20.22-8.31-3; 81,3-4; 86,18; 90,22; 122,23; adv. **mousikós**, (*khrésthai*, use) for music, 10,2  
**nénemia**, stillness of wind, 59,4; 89,27-8; 118,15-16; 124,20-1,23; cf. *galénē*, *éremia*

**noein**, think, comprehend by the mind, apprehend by intellect, 87,14; 102,28; cf. **nous**, *sunienai*

**nomimos**, lawful, 104,26; **nomos**, law; 9,14; 15,5-7.9-11.13  
**nomothetein**, lay down the law, legislate, 18,24; 82,31

**nosein**, be sick, 20,25-6; 91,26; **noseros**, sick, 71,2; **nosopoein**, cause sickness, 4,27; **nosos**, 20,24; 21,1-3; 52,9; 91,19.24-5.27; 92,5-7; opp. *hugeia*

**nous**, intellect, 106,9; 118,4-5,11; **noun ekhón**, having intellect, intelligent, 68,15; cf. **noein**, *dianoia*

**oikeios**, at home with, properly belonging to, appropriate, 2,20; 3,29-30; 4,1; 25,11; 76,11.15.18-19; 87,7; properly belonging to; 38,29; 124,20; peculiar, 4,6.14; 5,5; 9,20; 22,18; 23,3 Ar.; 25,20.24-5; 54,6; 57,3; 97,16; adv. *oikeiōs*, appropriately, peculiarly, 3,24; 54,8

**onkos**, mass, bulk, volume, 112,14

**onoma**, name, noun, word, esp. as referring to, naming, 9,17; 41,24; 43,9 Ar.; 44,7-8; 58,9; Ar. 106a11; 98,11.18; 107,17.20.23-6.28-9; 108,4; **idion**, special, personal, private, proper, 114,9-10; **kurion**, proper name, 60,13;

**onomastikos**, such as to name, **hós onomastikon sullabón**, taking together as one compound

nominal phrase, 42,1;  
**onomatopoiein**, create, coin words, 82,31

**ópheleia**, quality of being beneficial, 28,1.23; adv. *óphelímós*, in a beneficial way, 28,3; **óphelein**, benefit, be beneficial to, 18,34; pass. 28,6; cf. *khrésimos*

**opsis**, (eye)sight, 20,16; 45,5; 59,2; 102,11; **optiké**, optics, 22,22

**organikos**, instrumental, 4,34; 94,9; **organon**, tool, instrument, 9,22.28-9.31-2; 10,25; 33,25; 35,25; 36,3; 68,9; 74,29; 75,1; 85,28; 88,2.7.9.11-12; 89,30; 90,2; 114,25; 117,4; 119,3.5

**ousia**, essence (of some subject), 4,2; 37,34; 38,2-5.9.11.13.27; 39,14.16.21; 42,8.26; 45,20-1.26-7; 46,4.14; 48,25; 49,11; 50,3.7.9.11.30; 51,1-2.13; 54,6.11.19; 55,16.19; 63,29; 69,23.25; 97,28; 116,18-19; 120,7.10; 121,24; 122,3.6; (category of) substance 51,12; 62,22-3, Ar. 103b28; 65,17-18,23.25.32; 66,1-3.9.15-19.22.25-6.31; Ar. 103b31; 67,18-22; 93,1-2.15-16; 100,30; 106,8; 108,2; 110,29; cf. *hupokeisthai*

**pantelós** (adv.), perfectly, quite, 26,11

**pantós**, always, invariably, 8,5.7; 9,5; 58,19; 65,25

**parabolé**, comparison, comparing, 29,8; 72,6-7.17 Ar.; cf. *parathesis*, *sunkrisis*

**paradeigma**, example, 62,9; 77,29; 86,8-9.13

**paradidonai**, to offer, transmit, present, 5,19; 7,13; 19,20; 26,29; 55,24; 85,27; 90,8; 96,26; 97,2.20; 98,6; 102,5-6.20; 104,16; 108,29; 112,8; 124,31; **paradosis**, offering, presenting, presentation, 34,15; 36,4; 105,12

**paradoxos**, paradoxical, i.e. going against common notions, 3,20; 71,24; 78,21.27; 79,30; 81,16.27.29; 83,13

**paragein**, lead astray, mislead,

29,6.9; 119,16; ***paragôgê***, a deception, 22,33; 23,15

***paragraphesthai***, to note, 93,17

***parakolouthein***, of things, to attend to, 5,1; 50,20; of persons, to attend to, follow, 28,9

***parakrouesthai***, knock off balance, mislead, 120,23

***paralambanein***, to use, employ, 87,12; 94,9; cf. ***lambainein***

***paraleipein***, omit, 9,16; 15,4; 32,23.26; 119,7

***parallassein***, go, pass by, beyond, surpass, 59,18

***paralogismos***, fallacious inference, fallacy, 21,22; 22,19.34; 23,5.9.11.12 Ar.; 25,11.20.24.29; 120.28.34; 121,6;

***paralogizesthai***, trap in a fallacy, 120,20.24; 121,2

***parangelma***, precept, 97,2

***parasêmeainesthai***, to note, 93,17 Ar.; cf. ***paragraphesthai***

***paraskeuē***, preparation, procuring, provision (of propositions), 88,16; 90,26; 119,6.9

***parathesis***, setting down beside, next to, juxtaposing, juxtaposition, comparison, 72,8; 90,31; 122,26;

***paratithenai***, to set down beside, next to, to juxtapose, 72,16; ***deiktikon***, as indicating, 23,10; 65,21; 98,14; (as) an example, 78,1; 122,10; cf. ***parabolé***, ***sumblétos***, ***sunkrisis***

***parekhein***, provide (usefulness), 10,18, (*tén ktésin* put in possession), 34,14; (med.) 9,27; 10,1; 30,8; 83,27; 84,2; render, 80,11.15; 83,27; 84,6; 97,5

***parelkein***, (of premiss), be redundant, 8,30; 9,1.3; (of argument), contain a redundant element, 13,29

***paristanoi***, to (re)present, 82,13; support, defend, (thesis), 18,32; assist, help (interlocutor), or support, defend (one of two contradictories in answer to a problem), 27,10

***paronomazein***, name after, 104,7-8.10-11; ***parónumos***, (of a thing) named after, (of a word) derived, derivative, 104,1.10

***pathétikos***, such as to be affected, susceptible, affective, emotional, passionate, (part, function of the soul) 75,30; ***pathos***, affection, modification, 50,31; 51,25

***peira***, trial, test(ing), ***peiras kharin***, for (the sake of) trying, testing, 22,14; 23,7

***peirasthai***, to try, test, 6,21;

***peirastikos***, such as to try, test, for trial, testing (of), ***sullogismos***, trial syllogism, 22,10.12; 25,18-19.21.22.28

***perainein***, (of syllogisms) conclude, ***adiaphorós***, non-differently, 10,8,10; ***amethodós***, unmethodically, 14,21; 87,8; cf. ***sumperainesthai***

***peras***, limit, 30,15.27

***periekhein***, to contain, include, ***en hautēi***, within itself, 20,28; 21,1-2; encompass, 39,13; 41,9; 83,18; cf. ***periokhē***,

***perilambanein***

***perigraphé***, of (semi)circle, circumscription, 24,1; of the topic, compass, 5,23; ***perigraphein***, circumscribe, of plot of land, 41,26; of semicircle, 25,6; outline, draw a figure, 23,1; cf. ***hypographé***

***perilambanein***, include, 5,23; 20,27; 34,19; encompass, 49,7.9; 51,7.9; comprehend, 94,25.29; capture (by one name), 43,19; ***hôs tupōi***

***perilabein***, in outline, 25,13; Ar. 101a18; 58,1; Ar. 103a27; 93,20; Ar. 105b19

***periokhē***, outline of content, of a species of syllogism, 11,22-3.27.29; cf. ***periekhein***,

***perigraphé***

***peritteuein***, be in excess, left over, remain, have not been included, 87,23; ***perittos***, odd, 71,2; 76,5.16; cf. ***artios***; redundant, 14,1; 42,13

***pezos***, living on land, terrestrial, 40,5.9; 41,3; 43,16-17; 20,31; 93,3; 109,10.14; 118,26

**phainesthai**, appear; 109,16; to be, look like, 2,25; 6,15; cf. **phaneros**

**phaneros**, evident, 7,8; obvious, ass. **enargés**, 8,28-9; 9,23; 37,19; clear, Ar. 104a6; **phantasia**, image, notion, 30,25; impression, 123,30; cf. **phainesthai**

**pheuktos**, to be avoided, object of avoidance, 74,19; 81,11; opp. **hairetos**, cf. **phugé**

**philanthrōpos**, evincing human-kindness, loving kindness, 28,3

**philein**, treat as a friend, love, 103,22; **philētos**, befriended, beloved, 103,21; **philia**, friendship, love, 103,21

**philosophein**, pursue philosophy, 1,4,6

**philosophia**, philosophy, 1,13; 26,31; 29,22; 100,24; **philosophos**, of philosophy, philosophical, 4,13; philosopher, 1,9,12

**philotimeisthai**, ‘stand on tribute’, be emulous, quibble, 82,29

**phónē**, voice, vocal sound, 106,29; species of **psophoi**, sounds, 107,5; word, 8,4; 12,13; **phônétikos**, vocal, 109,25.27

**phora**, locomotion, 111,3

**phrazein**, be a sign of, 73,21

**phronésis**, insight, prudence, good sense, 19,1

**phthisis**, decreasing, diminution, 96,21, opp. **auxésis**

**phthora**, passing away, corruption, 95,6; 96,21; 111,4; 116,1

**phugé**, avoidance, 74,17.19; 95,25; cf. **pheuktos**

**phusikos**, natural, (of **ennoiai**) notions, 18,20; physical, 63,12.14; **sôma**, body, 89,3.5; of physics, of (physical) science, scientific, 4,4; 6,22; philosopher of nature, 115,9; **phusiké epistêmē**, physical science, physics, 28,25; **ta meta ta phusika**, metaphysics, 28,26; problems, 63,11.13; 76,1; 94,5; **theorem**, 74,12-13; proposition, 94,4

**phusis**, nature, 33,9; 38,11; 48,19.25; 50,3; 51,11; **phuseis**

**diaphorous**, things differing in nature, 100,21; natural state, 3,2; 28,12-13; **phusei**, by nature, 74,24; 116,21; 118,3; opp. **thesei**, 82,16-17; 118,4; **tēi hautou**

**phusei**, by its own nature, 82,14; **kata phusin**, according to nature, 6,7.9; as belonging to a thing’s nature, 38,11; naturally, 38,16; **kinésis**, natural motion, 62,23; 69,18

**pisteuein**, give credence, credit to, credit, believe, 19,7

**pistis**, credence, belief, 83,27; grounding of, ground for, belief, credibility, 18,15; **tou**

**prokeimenou**, of the issue, 32,26; from induction, 37,26-7; induction and syllogism; 62,7; from probabilities, 76,7; through syllogism; 80,12; **pistos**, credible, 94,24; the **katholou**, universal, 122,19, cf. 86,14; **pistousthai**, make credible, 30,2; 82,8; the universal; 86,14, cf. 122,19

**pithanos**, persuasive, 3,18.26; 4,16; 5,5; 20,17; 28,26; 29,6.11; 32,26; 87,7

**pitta**, pitch, 50,7.10

**platuônukhos**, having flat nails, 45,23

**plégē**, impact, 106,23.28

**pleiôn**, more, 59,13; 64,9; **pleon**

**poiein**, produce good, succeed, **ouden an pleon poioi**, one would fail, 28,15; more than one, two or more, 60,21; **epi pleón**, at greater length, more extensively, 18,6; having a wider, larger, extension, 9,8; 38,10.29

**pleonexia**, striving for more than one’s due, 116,7

**ploutos**, wealth, 19,1; 51,26.28; 77,1; 120,19

**pneuma**, air, 50,26.28

**pneumón**, lung, 16,20.22; 118,28; 122,25

**poiein**, make, produce, **poieisthai**

**ton logon peri**, devote one’s argument or speech to, argue or speak about, 84,21; 86,2; **tēn**

**pragmateian peri**, have one’s inquiry revolve around, centre on,

focus on, 95,23; ***poiētikos***, productive of, producing; 89,25; 97,10-11.14 Ar.; ***tekhnē***, art, 33,12

***poion***, the category of quality, 65,25; 66,3; 66,27.32; ***to poion***, quality, 47,17; the category of, 105,30; ***en tōi poion ti esti***, in the category of what kind of thing it is, 113,24; ***poiōtēs***, quality, ***hē autē***, the same, 59,12; ***metablēton kata***, capable of change in, 110,29; predicated, 66,9; as a category, 65,24; 66,2.9; 103,26; cf. ***posos***

***poios***, what kind of, 13,22; 47,18; 78,24; a certain kind of, qualified thus, of a certain description, a particular, 33,26; 40,3

***politikos***, of civil conduct, civic, political, ***hulē***, subject-matter, 5,11; ***akroaseis***, lectures, classes, 95,27; problems, 6,20

***pollakhōs***, in a number of ways, in many ways, ***legesthai***, be said, 96,24.27; 98,6.8-10; 100,19; 102,7; two species, in ***onoma***, word and in ***logos***, phrase, 88,13; 96,28-97,1

***posotēs***, quantity, as a category, 103,26

***pragma***, thing, 42,26; 50,1.3.5.8; 58,9; 60,16; 69,25; 79,11.13-14.17.20; 99,23; thing, fact, 19,24; ***kata to pragma***, with respect to the thing, opp. ***kata to onoma***, with respect to the name, 98,10; as to content, 94,22; 99,22

***pragmateia***, study, inquiry, 4,3; 27,3; 55,2 Ar.; 67,24; esp. subject of inquiry, 27,2; treatment of this subject, 55,27; 56,30; treatise in which it is laid down, 1,3; 6,17; see ***poieisthai***;

***pragmateuesthai***, study, deal with, 4,25; 5,4.18; 7,7

***praktikos***, such as to act, (fit) for action, ***hōs praktika***, as a course of action, as possible actions, 74,26; ***praktos***, to be done, 95,5; of (political) action, 4,15

***proagein***, to bring along, 116,22

***proaireisthai***, choose, 26,9; ***proairesis***, preference, 121,30-1

***proballein***, to throw out, put forward, offer as a problem, raise, 3,9; 36,24; 37,1; ***problēma***, problem, 6,14.19.20.23.24.27; 7,1.4; 34,27; 35,18-19.26; 37,1.3.13.15.16.18-19.21.25-9.32 Ar.; 38,22; 39,25.29 Ar.; 40,2.4.8.12.13-16.19.22-3.26.28.30 Ar.; 41,1.3.9.11.15 Ar.; 61,27; 63,24; 65,6; 63,11; 68,18; 69,5.8; 68,10-12.14.18.20.23.25.27-9; 69,1.4-5.9; 74,11-12; 78,16; 82,20; 83,25.28; 84,4.5.7.11.21.30; 85,4.7.9.11.13.15.23; 93,29; 94,2.6.17.23; ass. ***proteinein***, cf. ***kataballein***

***prodeiknunai***, show, prove first, 17,24; of premiss,

***prodeiknuousa***, that which should show before, should first prove, 10,15

***prodélos***, evident, 103,18; obvious, 115,24

***prodotēs***, traitor; 9,12-13

***proēgeisthai***, lead the way, come first, precede, be prior to, 4,26;

***proégoumenos***, come first, be primary, 7,12; cf. 18,5; adv.

***proégoumenōs***, primarily, 1,6; speak of, 18,5; cf. 7,12; discussion of, 20,1; mean, 12,8.19.26; serve to make plain, bring out, 12,12.15.28.32; affirm, 12,21; 13,2; deny, 12,22

***proeidēnai***, know beforehand, 1,8

***proienai***, proceed, of syllogism, 3,3; of medicine, helmsmanship, dialectic, 32,17; 38,20; cf. ***proodos***

***proīstasthai***, place oneself, stand before, at the head of or so as to protect, ***proistamenos***, champion, proponent, 78,20; cf. ***prostatēs***

***prokeisthai***, be put forward, before one, in question, at issue, 6,11; ***prokeimenos***, before us,

***pragmateia***, treatise, 6,17;

***prokeimenon***, purpose, 67,30; thing put forward, issue, 2,20; 3,7; 4,6; 5,6.27; 6,5; 13,15; 57,20; 121,25; as the thing with which

we started, 108,16; cf. ***keimenon*** 117,28

***prokheirizesthai***, muster, examine, 62,18; ***prokheiros***, at hand, readily available, 123,25

***prokrinein***, discriminate before, distinguish first, 29,7; prefer, 48,21,28

***prolambanein***, grasp before, take (a point) first, initially, 21,31; ***proeiléptai***, it is presumed, there is a presumption, 78,14-15; ***proeilémmenos***, presumption and belief, 83,26; ***prolépsis***, presumption, notion, 70,22; ***koiné***, common, 73,16; 78,27; cf. ***doxa***

***proodos***, proceeding, progress, 86,10; cf. ***methodos***

***proparaskeuazein***, prepare (beforehand), 27,27; 92,26; preparation, 83,32; see ***paraskeuē***

***propheresthai***, put forward, i.e. introduce and submit by uttering, 69,23; ***phora***, (manner of) expression, cf. ***ekphora***, ***lexis***

***prosaporein***, raise puzzle(s) relating to, in connection with, 7,11; cf. ***aporein***

***prosdialegomenos***, interlocutor, 7,27; 27,9; 93,12

***prosdiorizein***, provide additional determinations, distinctions, specification, 83,5; cf. ***diorizein***

***proskhrésthai***, to use in addition, 22,22; 72,11; in geometry (principles), 23,18; cf. 23,12; cf. ***proslambanein***, ***khrésthai***

***prosklisis***, inclination (favourable, towards), partiality, bias, 76,9

***proslambanein***, to obtain in addition, 89,28; assume additionally, 6,4,9; ***proslépsis***, additional assumption, 8,25; 11,3

***prospítein***, be assigned, ***tautotés***, sameness, 59,27; befall, ***prospíptonta***, what befalls, circumstances, 32,19

***prospoieisthai***, pretend, claim, 25,26

***protassein***, give order, 61,12; pass. receive order, 61,12; cf. ***protassein***, ***suntassein***

***prostaté̄s***, proponent, 77,23; 78,28; 79,1; 80,1.5,9; 81,33; 82,14; cf. ***proistasthai***

***prosthékē***, addition, 8,13; 9,22; 47,7; 53,1; 76,14; 103,11.14

***prostithenai***, add, 7,20; 9,3.11-12; 14,1; 30,24; 34,16; 37,16; 38,26; 41,4.12.16; 70,12.17; 73,5; 74,14; 75,3.7.19.22; 77,9.11; 78,6; 80,3; 82,5

***protasis***, proposition, premiss, asking of a contradiction, i.e. contradiction in question form, 36,8; in opp. to ***apodeiktikos***, demonstrative, ***epistémōnikos***, scientific: 'dialectical', approved question, 70,10.27; 73,28; in opp. to ***problēma***, problem, dist. not by question form, 40,24; propounded as a contradictory pair, 69,2-4; a request to give one part of this as answer, 40,27-8; dist. from other ***eidē***, species, of question, 69,13-70,1; the 'syllogistical' protasis, the answer to such a question, 36,9-11; dialectical one as ***aitia***, cause, of the syllogistical one, 37,10-11; through the ***genē***, kinds, 65,22; against nature, 67,21; being supplied with, 68,6; dist. from thesis, 70,25; contradictory, opp. to one calling for punishment, 84,3; similar to approved, 90,28; neither logical, of science, nor ethical, 93,29; established by syllogisms, 64,16; the ***hulē***, matter, of syllogisms, 90,3; matter and parts of syllogisms, 119,8; what syllogisms consist of, 37,11; being supplied with, 5,26; 9,10-11; ***hē katholou***, universal, the major, 8,28; the ***lémma***, assumption, 23,21; cf. ***proteinein***

***protassein***, arrange, order, put in front (of), before, 40,19; cf. ***suntassein***

***proteinein***, propound, 36,23; 37,2; 53,1-2; 68,14.16; 69,4,8; 71,23;

83,18; 84,16; 90,14.16.18 Ar.; 91,2; cf. *protasis, proballein*

**protetekhnologêmēna**, technical preliminaries, 124,33

**prothesis**, purpose, 1,3; 7,4; 25,17.28; 34,7

**protithenai**, to put forward, 3,11.13; 4,5.9; 5,29; 7,1.4; 69,17; 88,19; 117,4; Ar. 100a2; to put in front, opp. *epipherein*, 94,15; cf. *prothesis*

**prôtos**, first, non-t., 91,20; prior, primary, *protasis*, proposition, ass. *anapodeiktos*, indemonstrable, 17,3.17; 70,3; ass. *aléthês*, 16,1.3.14.19; opp. *ta meta tauta*, what comes after them, 16,4; opp. *husteron*, what is later, 16,14-15; two species or senses, 16,5-6; criterial feature of *apodeixis*, demonstration, 16,31; **prôtôs**, in the primary sense, 18,30

**proüparkerhein**, be present, exist beforehand, 81,3; cf. *huparkhein*

**proüpoballein**, lay a foundation or submit, suggest in advance, 70,29

**pseudê̄s**, untrue, false, 6,12.15; 79,23; **pseudesthai**, speak falsely, express a falsehood, 79,23-6; cf. **pseudos**

**pseudographein**, offer a false construction, 22,25.28.31; 23,2; 24,1.19; **pseudographêma**, false construction, 22,20.27; 23,24.25; 25,5; dist. *paralogismos*

**pseudos**, what is untrue, falsehood, 6,13; 22,26; cf. *pseudê̄s*

**psilos**, mere, bare, *gnôsis*, discernment, 74,20; *doxai*, opinions, 79,29

**psophos**, sound, 45,3.6; 106,29-30; 107,2-3; 108,22.24; cf. *phônê*

**psukhê**, soul, 17,9-11.13.15; 19,1.10; 53,3; 74,23; 75,30; 76,2.21.28

**psukhein**, to cool, 18,22 **psukhros**, cold, 18,22; 96,11; **psukhrotês**, cold 50,22.25

**ptôsis**, case form, 103,30; 104,1

**punthanesthai**, inquire (after, about), 69,17

**pur**, fire (as element), 50,15; 62,23-4; 69,18; **puretainein**, be in a fever, 73,21; **purettein**, have, be in a fever, 106,14

**pusmatikê**, (*erôtésis*, question), informative, 40,29

**rhêma**, word, 121,10

**rhêtôr**, orator, 4,11.13-14.28; 5,3.12; 6,20; 33,10

**rhêtorikos**, rhetorical, 9,9; 25,30; 27,21; 62,9-10; 82,20; 86,8-9; 95,30; 117,18; **rhêtorikê (tekhnê)**, rhetoric; 3,26; 5,10; 6,18-19; 32,3; 33,7

**rhopê**, momentum, impulse, 76,8

**saphêneia**, distinctness, clarity, 7,14; 43,33; 119,14.16

**saphê̄s**, distinct, distinctly clear, clear, 17,24; 72,24; 87,12; 119,2.12 Ar.; adv. *saphôs*, 83,16; 119,15; opp. *asaphê̄s*

**selênê**, moon (eclipses as example of scientific explanation), 16,9-10,12; 17,18.20

**sêmeinein**, to signify, mean, 1,9; 3,23; 50,4; expressions, 7,25; 58,4; as outside language, 9,18; 58,9; 60,8.17; 66,28; 82,31; 97,4.16.23; 99,6; 100,18; 101,11.23; 103,12; 107,17.20.24; 113,1.3-5.15.19.28; 120,15.21-2; ambiguous as to whether referents are linguistic or not, e.g. 105,21.23-4.26

**sêmantikos**, meaning, signifying, 58,14; 60,4; 61,8; 107,26; 111,28; (as a sign, not a linguistic utterance), 105,2

**sêmeion**, sign, indication, 8,29; 33,16.23; 110,13.20; geom. point, 23,17; 30,21.23; 31,10.11.13.16.19.21.25; cf. *stigmê*

**sêmeiôsis**, diagnosis, 33,6

**sêmeioun**, to note, remark (mentally), 23,21; 72,18; 98,24; cf. *episêmainesthai*

**simos**, snub-nosed, 49,5.17-19.22

**simotês**, snubness, 49,11.20.23; 50,1

**skhedon**, effectively, 9,22; practically, almost, 82,18

**skhêma**, figure (of syllogism), 2,5.8.15.29; 21,12.26.29; 26,1; 76,2; 95,14; **tês lexeôs**, form of the expression, 10,20; 48,11

**skhématisēin**, to frame, shape, form, 5,15; 40,7; 94,17; 104,13  
**skhēsis**, relation, 13,22; logical and scientific, between affirmed premisses and conclusion, 45,6; between perceiver and perceived, 118,8  
**skopos**, aim, 4,21.28  
**sôizein**, preserve (use of syllogism), 9,26; 10,5  
**sôma**, body, 19,1.10.14-15; 22,5; 30,14-15.17.28-9; 31,12.15; 76,11-12.20-1; mathematical, physical, 89,3-5  
**sophistés**, sophist, 6,16; 80,15.30  
**sophistikos**, sophistic, *logos*, argument, 119,26; syllogism, 2,25; 25,10; of person, 23,6; **sophistikē methodos**, procedure, 2,23; 2,25; adv. **sophistikós**, 84,21  
**sophos**, knowledgeable, expert, well-informed, 70,13.15-16.18.20-1; 73,7-8; 81,9.13.15.30-1,33; 82,1-4; 90,11; wise, 1,13; 84,24.26-7; cf. *epistêmôn*, *tekhnîtes*  
**sôphrôn**, sane, sound (in mind), of sound mind, temperate, Ar. 106,1,4  
**sôphrosunê**, sanity, soundness of mind, mental balance, self-control, 21,27; 44,12; 115,3; 116,1; 117,10; 121,27  
**sphaira**, sphere, 76,14  
**sphairikos**, spherical, (*skhêma*, shape), 76,15  
**sphairoïdés**, of the form of a sphere, spherical, 69,28; 74,23; 76,1,10  
**sphodros**, vehement, 107,3; 121,28; intense, 59,16; adv. **sphodrós**, vehemently, 106,19  
**sphodrotês**, vehemence, 107,1  
**sphugmos**, pulse, 105,2  
**sterein**, be deprived of, def., 103,6-7  
**sterêsis**, lack (of an attribute), privation, 96,7.16; 100,31; 102,23-4; 103,5.11.17  
**stigmê**, geom., point, 31,7; cf. **sêmeion**  
**stoikheion**, element, 5,22; place or topic, 70,5  
**stokhastikos**, stochastic, conjectural, 32,17.21.27; 33,17; 34,3 opp.  
**poiêtikos**

**sullambanein**, take together (i.e. as one), 42,1; include, 49,19; be bound up with, 47,21  
**sullogismos**, syllogism, syllogizing, syllogistic inference, syllogistic deduction, 2,2.6.9.20.22.27; 5,24; 7,5-7.10.12.15-17.21.23-4.27; 8,11-14.17-18; 9,5-8.10.15.17-18.21.23-4.26-9.31; 10,20; 15,16.19-21.24-6; 18,8; 26,2.15; 35,5-6.14; 77,22; 80,6-7; 85,28; 86,20; 87,1,6; eristical, 22,33; 23,5  
**sullogistikos**, syllogistic, *logos*, argument, 11,12; premisses, 87,4; figures, 95,14; *sumplokê*, conjunction of premisses, 26,16; opp. **asullogistos**; **suzugia**, pair of premisses, 74,32; opp.  
**asullogistos**, (of) syllogizing, such as to syllogize, (rhetoric), 6,19; (the dialectician), 19,8;  
**sullogistikê methodos**, procedure, 2,2.23.25; 3,7; 7,13; the dialectical method, 85,7;  
**pragmateia**, study, 26,18; adv.  
**sullogistikós**, syllogistically,  
**deiknunai**, prove, 8,15.20; 9,2; 14,22; *sunagein*, deduce, 14,27; 15,3.12; *hepesthai*, follow, 9,5-7  
**sullogizesthai**, syllogize, 2,24; 3,5.11-12.16.22; 4,10; 5,3; 6,1.8.12; 7,5; 8,1.29; 15,22-3.28; 88,19; deduce syllogistically, 6,11.13  
**sumbainein** to come about, happen accidentally, 11,2; to follow, 7,23 Ar.; 13,13.17; be an accidental (property) of, 52,26; 66,15; 67,19-20; **sumbebêkos**, accidental (property), 11,11; 37,23; 38,4.15.17.19.23; 48,16-20; 49,10; 50,11; 51,23.25; 52,1.10.21.25.27; 66,14.16.20-1.25; 67,17-18.21-2; *kata sumbebêkos*, as an accidental (property), by accident, 12,21.23  
**sumblêtos**, comparable, 111,6 Ar.; 9,11.14.22.24-5; 112,2  
**summètria**, proportion,

proportionate(ness), 110,19; opp. *asummetria*

**summetros**, proportionate(ness), 110,22.24; *kata poson*, quantitative, 110,19; **summetrōs**

**ekhein**, be proportionate, 110,10 (Ar.); 17,20

**sumperainesthai**, (of persons) conclude, 14,5; cf. *perainein*

**sumperasma**, conclusion, 8,24; 18,9; 64,26

**sumpheron**, expedient, 118,7

**sumphutos**, connate, innate, 120,5.10

**sumplérōtikos**, such as to bring to fulfilment, 38,28; 51,1

**sumplokē**, conjunction (of premisses) 21,18.25; 26,16

**sumptōma**, what happens to, 51,2

**sunagein**, bring together, 14,25; 15,2; deduce, 2,21; 6,5; 8,21; 13,32; 14,7.9.27; 15,3.12; 17,15; 80,24

**sunairein**, take together; 14,25; 15,2

**sunairesthai**, to help, 114,26

**sunamphoteros, to**  
*sunamphoteron*, what is two things at once, combination, 39,1-2; 49,20.22; 99,16; 109,5

**sunaristan**, to breakfast together with, 84,18

**sundairein**, divide up together with, 71,20

**sunekhēs**, adv. *sunekhōs*, continually, 79,3

**sunēmmenon**, conditional, 8,24.26.28.30; 9,2

**sunepipherein**, bring (on) with it, 91,21-3.26; ant. *hepesthai*, cf. *epipherein*

**sunergein**, contribute to, towards, 75,18; 75,1; 85,1

**sunergos**, contributing to(wards), 35,22; 74,5.27.32; syn.

**sunteloun**, cf. *suntelein*

**sunesis**, understanding, 32,18; cf. *sunienai*

**sunētheia**, (linguistic) custom, convention, 40,23; 82,18.26; ass. *khrēsis*, usage

**sunēthēs**, customary, conventional, usual, common, 42,5; 82,21.30; adv. **sunēthōs**, customarily, usually, 58,7

**sunethizein**, habituate, accustom, *heautous*, oneself, 94,27

**sunienai**, to understand, 28,5.7; 102,28; 103,2; cf. *sunesis*

**sunistanai**, to 'cause to stand together', found, provide with, establish upon a foundation, 17,3; 30,27.29; 46,15; 79,1; 82,22; constitute, *sunestēke*, consists of, 34,11; cf. *sustasis, asustatos, kataskeuazein*

**sunkatathesis**, (Stoic t.t.), a coming down on one part of a contradictory pair, i.e. on one side of a contradiction, a question, whether by one party, assent, 75,28; 77,22; or collectively, consensus, agreement, 76,5; 77,24

**sunkatatithesthai**, come down on one side of a question, 77,6; ass. *kataléptikos*

**sunkeisthai**, be compounded, 84,21; 110,2; cf. *suntithenai, sunthetos*

**sunkephalaion**, bring under one heading, 1,18

**sunkhōrein**, concede, 3,18-19; 7,26-7; 8,2.5-6; 59,25.28-9; 68,17.22; 70,17; 73,6.15; 87,4.11; 119,21-2; 120,15.17; ass. *homologein, didonai*

**sunkrinein**, compare, 60,19

**sunkrisis**, comparison, 51,23; 52,11; 111,8.15; cf. *parabolē, parathesis*

**sunkritikos**, (problems) of, involving comparison, 51,22; 52,11; 57,14; 111,10; ass. *sumblētos*, compressing, contracting, 92,2; 113,13; opp. *diakritikos*

**sunōnumos**, adv. *sunōnumōs*, as another name for something, synonymously, 7,16.19; 42,18; 108,31; opp. *homōnumos*

**sunoran**, to have a comprehensive view; 27,22; 29,15; 115,10; 121,22; to catch in a comprehensive view; 117,13; Ar. 105b11; cf. *eusunoptos*

**sunousia**, meeting, 28,2.9; class, 27,13; cf. *akroasis*

**suntassein** to order together, classify,

class with, 39,2; 54,31; 62,8; cf. *prostassein, protassein*

**suntaxis**, construction, i.e. being ordered together with other parts of speech into a sentence, 40,3; ass. *prophora*

**sunteinein**, bear on, 3,25 Ar.; 74,4; 94,13.28

**sunteleia**, contribution, 89,30

**suntelein**, contribute, 1,7; 28,27; 35,27; 55,10.30; 74,33; 75,17; 81,12; 85,4.20; 88,2.12.25; 89,3; 90,3; 94,9; 95,1; 119,5; cf. *sunergos, sunergein*

**synthesis**, putting together, 9,18; 106,26

**sunthetos**, composite, 64,10; 99,16; 109,2.17; 110,8; cf. *suntithenai, sunkeisthai*

**suntithenai**, put together, compound, combine, 1,18; 14,25; 64,26; opp. *diairein*, ass. *sunairein*, *sunagein*, cf. *sunkeisthai*, *sunthetos*

**suntrekhein**, run together, come to coincide, 11,11; 12,2

**sunuparkhein** hold at the same time, together, 11,20-1; 80,23; cf. *huparkhein*

**sustasis**, establishing upon, providing with a foundation, 30,1.4; 83,27; cf. *sunistanai, asustatos, kataskeuē*

**sustellein**, to condense, 50,28

**sustoikhos**, member of the same set, 104,1.2.6.9

**sustolē**, condensation, (*eis to elatton*, and reduction), 62,12

**suzugia**, pair (of premisses), 21,6.11.15; 74,32; 76,3; 91,28-9; 95,14; syn. *sumplokē*

**tarikhopoiein**, to pickle, 46,27

**tassein**, to order, 32,19; 53,3; pass. 33,13; i.e. to class, 38,27; Ar. 101b19; cf. *prostassein, protassein, suntassein*

**tautotēs**, sameness, 12,29; 45,13; 59,16.27; 124,17; ass. *homoiotēs*

**tekhnē**, discipline, art (including dialectic as one of the stochastic arts); 32,20-1; 33,10.17.20-1.24; 80,27; (special) discipline, 84,30; 85,2; 90,21; Ar. 105b1, cf. 104a14-34; (productive) art, 33,12; *kata (tēn) tekhnēn*, according to the (rules of the) art, 27,28; 33,18.23.25.28; 34,3; 73,14.18; craft, skill, 2,16-17; virtue not an art, 115,4; ass. *epistêmê, methodos, poiétikos, stokhastikos, praktikos*, a method for doing, or producing things, rather than for acquiring insight 33,12

**tekhnikōs**, according to the rules of the art, 33,16

**tekhnités**, practitioner of an art, 34,4; 73,4.8; cf. *epistêmôn, sophos*

**tektonikos**, (use) in the carpenter's way, for carpentry, 10,2

**tektôn**, carpenter, 86,18

**teleios**, complete (and perfect), 1,13; 46,2.4; 76,11-13; *to teleion*, completeness (and perfection), 62,11; (t.t., of syllogisms), 2,7; opp. *atelês*

**teleiotês**, completeness, completion (and perfection), 43,8; 46,1; 111,2; 118,14; cf. *telos, entelekheia, energia*

**teleioun**, carry to completion (and perfection), 43,8; cf. *sumplérôtikos*

**teleutaios**, last, 64,11

**telikos**, of the nature of a goal and completion, final, 6,4.7.9

**telos**, end, goal, 1,4.8; 6,1; 33,11.14.21-2.26.29; 34,2-3.9; 52,13-14; 74,24.26; fulfilment, completion (and perfection), 46,5; end, 72,26; cf. *teleiotês, autotelês*

**temnein**, cut up, 37,24; 47,30; 106,22; ass. *diairein*, geom. intersect, 24,4; cf. *tomê*

**térein**, observe, preserve, 94,19

**tetrakhôs**, in four ways, 76,2

**thanatos**, death, (is twofold), 14,15

**tharraleos**, bold, 21,31

**thaumazein**, admire, 4,32; 19,17; wonder, be surprised, 60,18

**theios**, divine, *sôma*, body, *aeikinéton*, in eternal motion, 45,24; cf. *theos*

**thêlus**, female, *pathos*, a mode,

**sumbebēkos**, an accidental property, 51,5; 109,8-13

**theōrein**, theorize, 74,3; to study, 34,6.15 Ar.; **theōrētos**, object of theoretical study, 81,11

**theōréma**, theorem, 73,25 Ar.

**theōrētikos**, theoretical (*akroaseis*, lectures), 95,26; **theōrētikē**, theoretical science, 74,25

**theōria**, (theoretical) study, theory, 1,8; 45,10; 74,26; 85,10; 88,22; 124,12; theoretical insight, 74,10

**theos**, god, 19,2; 53,3; 106,9; cf. **theios**

**théra**, search, 100,8; 117,6; 118,8.23

**thérān**, to search (for), 92,21; 118,23

**therapeuein**, to nurse, 105,3; 106,10

**thériotēs**, bestiality, brutality, dist. *kakia*, wickedness, 116,2

**thermainein**, to heat, warm, 18,21

**thermos**, hot, 18,21; 50,14; 96,11

**thesis**, positing, 2,14; position, thesis, 82,25; in wider sense, def. 27,14; 82,18-19; 91,12; in narrower sense, 18,32; 70,25; 78,23-6; 79,2; def., 82,12.15.27; rhetorical problem, def., 82,20.23; **thesei**, 'by imposition (of name)', 'by institution, by convention', opp. *phusei*; 82,16-17; cf. *tithenai*, *lépsis*

**tithenai**, *tithesthai*, put, posit, 8,6.8-10.29; affirm, (of the answerer), answer in the affirmative, assent to, 1,12.15; 2,1; 7,22.24-6; 28,10.18.22; 30,19-20; 80,7; 90,23; 91,13; 93,19; 119,31-2; 120,16; 121,2.7.9.22.24.26 Ar.; 105b11,17; cf. *keisthai*, *didonai*; to set down, 37,30; put, place, 46,6; species within genus, 42,19

**tomē**, dividing genera into species, 122,7; geom. intersection, 25,9

**topikos**, of, on places or topics, 1,3; **kinēsis**, movement, of place, in space: locomotion, 96,20

**topos**, place, topic, def., 5,21; ass. *arkhē*, starting-point, and *stoikheion*, element; (title of work) 5,28; 19,20; 34,15; 35,25; 36,3; 48,12; 52,18; 55,5; 101,1.7.17.20; 103,15; 104,26; 105,12; 108,29; 111,7; 114,3; ass. **aphormē**, point of departure, 90,7; 96,26; 124,31; **aph' hōn hormōmenoi**, starting from which, 5,19; for searching, 100,7; for finding, 27,20; 102,5; 112,7; through which we shall know, 115,16; common to, shared by (contradictories, contraries), 102,18; Ar. 108b33; non-t., 5,15.22

**trigōnon**, triangle, 17,28; 23,27.29; 24,8.11-12.25; 25,2-4.9; 73,22-3; 85,11

**trikhēi diestōs**, having three dimensions, 31,1; 109,24.28

**trinkhos**, coping-stone, 1,15

**tropos**, way, manner, mode, type, form, **tés katēgorias**, mode of predication 38,16; **tou tautou**, way of being the same, of sameness, 58,5.26; 59,7; type of accident, said of the property, 66,21; mood (of syllogism), 2,4; ass. **kata tén lexin**, 69,6; **tropos tés ekphoras (tés kata tén lexin)**, manner of (verbal) expression, 37,17; 40,18; 41,11.14; 62,28; 68,24; **tés khréseōs**, way in which (arts) deal with (their matter), 2,18

**tukhē**, chance, 33,14.19; 115,32;

**tukhai**, (chance) events, 5,14

**tunkhanein**, happen to be, **tés tukhousēs (hulēs)**, just any, 33,26; opp. *poias*; **en tois tukhousin**, in, with any subjects, subject matter, 122,29

**tuphlos**, blind, 84,27; 96,16

**tupos**, *tupōi*, in outline, 57,10; **hōs tupōi**, 25,31 Ar.; **hōs tupōi perilabein**, in outline, 25,13; 58,1 Ar.; 93,20; **hōs tupōi eipein**, 25,31; 58,3; cf. *hypotupōsis*

**zētein**, seek, search, research, ask, inquire, investigate, 51,25-6; 52,22.28; 53,2.4.6; 57,25; 59,5; 62,18.21; 67,30; 68,12-13.23; 69,5.11; 74,3.20.26.29-31; 77,25; 78,4.28; 84,17; 95,26; 98,9; Ar. 100a23

**zētēma**, question, (instance of

re)search, 74,2; 75,11.21-2; 76,7; 77,29; 80,1.11; 81,6.8; 82,14;  
82,15 100,19

**zētēsis**, search, inquiry, investigation, **zētētikos**, investigative, 32,10  
29,1; 39,3.7; 44,15.19; 45,2; 52,2; **zōion**, living being, (when excluding  
53,8-9; 54,23; 57,12.23; 62,24; human and divine) animal,  
63,16; 68,21; 74,3.6.19.22; 75,16; 43,20.25-6; 92,13; 93,1.3-4

**zōtikos**, life-giving, 17,14

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